

Aspidium Oreopteris
 *Ranunculus alpestris; but
 rare
 Azalia procumbens
 Gnaphalium supinum; and
 a variety
 " sylvaticum; but
 rare
 Betula nana
 Veronica alpina
 humifusa
 *Eriophorum gracile
 Arbutus Uva ursi
 Pyrola rotundifolia
 " uniflora; but rare

Thalictrum alpinum
 Tofieldia palustris
 Hedypnois taraxaci
 Salix herbacea
 Vaccinium uliginosum
 " Vitis-Idæa
 Trientalis europæa
 Rubus Chamæmorus
 Silene acaulis
 Cerastium alpinum
 " latifolium
 * " nivale, *nova*
 species
 Malaxis paludosa
 Lycopodium annotinum

On mountains to the eastward of Clova, I discovered the beautiful *Potentilla tridentata*, new to our British Flora.

On the rocks among the Clova mountains, are to be found the following interesting plants:

Pteris crispa
 Aspidium Lonchitis
 Epilobium angustifolium
 Ilex Aquifolium
 Sonchus cœruleus of Fl.
 Brit.; truly a rare plant.
 The *Sonchus Canadensis*
 of Linnæus, although
 given by Dr. Smith as a
 synonym, is a very diffe-
 rent plant. *S. cœruleus*
 is now lost at Howden
 Pans, in England; and at
 present we know of no
 other habitat for it but
 the Clova mountains, and
 their vicinity
 Draba incana; and likewise
 var. β
 Poa flexuosa
 " glauca
 Melica nutans
 Pyrola secunda
 Potentilla aurea
 *Salix rupestris
 " prunifolia
 " Andersoniana

Salix arenaria
 " incubacea
 " glauca
 *Hieracium divaricatum
 " cerinthoides
 * " amplexicaule;
 besides several
 non-descript
 species
 *Tussilago alpina
 *Cochlearia grønlandica of
 Linn.
 * " alpina, *nov. sp.*
 *Lychnis alpina
 *Potentilla opaca
 *Arenaria fasciculata of Jac-
 quin; the fastigiata of
 English Botany
 Serratula alpina
 *Carex laxa of Whalenberg
 " atrata
 " pallescens; and
 several non-
 descripts of that
 genus
 Cyathea dentata

On the upland pastures grow the *Satyrium albidum* and *Satyrium viride*.

Among the rarer Mosses to be found among these mountains, may be mentioned the following :

<i>Hypnum pulchellum</i>	<i>Polytrichum hercynicum</i>
" <i>denticulatum</i>	" <i>strictum</i>
" <i>undulatum</i>	" <i>alpinum</i>
" <i>alpinum</i>	" <i>attenuatum</i>
" <i>plumosum</i>	<i>Bryum compactum</i>
" <i>mysuroides</i>	" <i>bimum</i>
" <i>implexum</i>	" <i>crudum</i>
" <i>molle</i>	" <i>Zierii</i>
" <i>Schreberi</i>	<i>Bryum julaceum</i>
" <i>rufescens</i>	" <i>alpinum</i>
" <i>fluitans</i>	" <i>trichodes</i>
" <i>stellatum</i>	" <i>dealbatum</i>
" <i>rugosum</i>	" <i>elongatum</i>
" <i>revolvens</i> ; and	<i>Neckera curtipendula</i>
some non-de-	" <i>crispa</i>
scripts of this	" <i>pumila</i>
genus	<i>Gymnostomum microsto-</i>
<i>Bartramia gracilis</i>	<i>rum</i>
" <i>arcuata</i>	" <i>lapponicum</i>
" <i>Merchiana</i>	" <i>fasciculare</i>
" <i>Halleriana</i>	" <i>stelligerum</i>
" <i>crispa</i>	" <i>curvirost-</i>
" <i>ithyphylla</i>	<i>rum</i>
<i>Tortula brevifolia</i>	<i>Buxbaumia foliosa</i>
<i>tortuosa</i>	<i>Splachnum rugosum</i>
<i>Trichostomum fontina-</i>	" <i>gracile</i>
<i>loides</i> ; and	" <i>tenu</i> e
var. β	" <i>angustatum</i>
" <i>lineare</i>	" <i>mnio</i> ides
" <i>glaucescens</i>	" <i>fastigiatum</i>
" <i>microcarpon</i>	" <i>ovatum</i>
" <i>rigidulum</i>	<i>Dicranum fuscescens</i>
" <i>capillaceum</i>	" <i>flagellare</i>
" <i>trifarium</i>	" <i>uncinatum</i>
" <i>ericoides</i>	" <i>falcatum</i>
<i>Grimmia cirrata</i>	" <i>fulvellum</i>
" <i>striata</i>	" <i>rufescens</i>
" <i>conostoma</i>	" <i>ovale</i>
" <i>nigrita</i>	" <i>patens</i>
" <i>Schisti</i>	" <i>montanum</i> , rare
" <i>Donniana</i>	" <i>squarros</i> um
" <i>heteromalla</i>	" <i>flexuos</i> um
" <i>recurvata</i>	" <i>polyphyllum</i>
" <i>acuta</i>	" <i>strumiferum</i>
" <i>rivularis</i>	" <i>virens</i>

Dicranum crispum
 " osmundioides
 * " pygmæum
 Jungermannia bifida
 " ciliaris
 " divaricata
 " setiformis
 " emarginata

Jungermannia reptans
 " adunca
 " julacea
 " cochleari-
 formis
 " trilobata
 " curvifolia
 " resupinata

Besides many others of the foliaceous mosses.

The species of the genus Lichen are, as might be expected, very numerous in these mountains. This extensive Linnæan genus has lately undergone a change in arrangement, and a subdivision into several genera, by the eminent Dr. Acharius. In mentioning the most remarkable, I shall adopt the new nomenclature.

Lecidea Muscorum
 " petræa
 " miscella
 " rivulosa
 " confluens
 * " fumosa
 * " fusco-ater
 " dendritica
 " atro-alba
 " silacea
 " Ederi
 " niveo-ater
 " pruinosa
 " cupularis
 " Dicksonii
 " tricolor
 " icmadophila
 " luteola
 * " atrata
 " granulosa
 " cinereo-fusca
 " calva
 " cæσιο-rufa
 " orosthea
 " polytropa
 " atro-rufa
 " lurida
 " canescens
 " vesicularis
 " pustulata
 Gyrophora glabra
 " erosa
 " proboscidea

Gyrophora cylindrica
 " pellita
 Verrucaria nitida
 " stigmatella
 " epidermidis
 " umbrina
 Endocarpon smaragdulum
 " miniatum
 " complicatum
 " Weberi
 Thelotrema hymenium
 " pertusum
 Sphærophoron coralloides
 " compressum
 Isidium corallinum
 " Westringii
 Urceolaria calcaria
 " cinerea
 " fimbriata
 " Hoffmanni
 " scruposa
 " Acharii
 " cirtaspys
 * " ostracodermis
 " diamarta of
 Acharius
 Parmelia ventosa
 " perella, var. 3.
 " Upsaliensis
 " tartarea, var. 2.
 " frigida
 " dispersa
 " cerina

<i>Parmelia vitellina</i>	<i>Parmelia crispa</i>
" <i>hypnorum</i>	" <i>fascicularis</i>
" <i>brunnea</i>	" <i>furfuracea</i>
" <i>candelaria</i>	" <i>jubata</i> , var. 4.
" <i>gelida</i>	<i>chalybeiformis</i>
" <i>circinata</i>	<i>Sticta limbata</i>
" <i>epigea</i>	" <i>sylvatica</i>
" <i>miniata</i>	<i>Peltidea aphthosa</i>
" <i>cæsia</i>	" <i>resupinata</i>
" <i>recurva</i>	" <i>crocea</i>
" <i>fahlunensis</i>	" <i>saccata</i>
" <i>conspersa</i>	<i>Cetraria nivalis</i>
" <i>hæmatomma</i>	" <i>islandica</i>
" <i>pulverulenta</i>	<i>Cornicularia aculeata</i>
" <i>stygia</i>	" <i>tristis</i>
" <i>affinis</i>	" <i>spadicea</i>
" <i>plumbea</i>	" <i>lanata</i>
" <i>caperata</i>	" <i>pubescens</i>
" <i>herbacea</i>	<i>Stereocaulon paschale</i>
" <i>glomulifera</i>	<i>Bæomyces roseus</i>
" <i>scrobiculata</i>	" <i>rupestris</i>
" <i>pulmonacea</i>	" <i>Papillaria</i>
" <i>saturnina</i>	" <i>bellidiflorus</i>
" <i>lacera</i>	" <i>cenoteus</i>
" <i>nigrescens</i>	" <i>spinosus</i>

The plants, natives of the Clova mountains, which have the chief claim to the farmer's notice, are the Gramina. Of the rarer grasses, the first is the *Alopecurus alpinus*, a new species which I discovered many years ago. This grass I have cultivated for several seasons, and I am convinced it is but little inferior to the *A. pratensis*, so much taken notice of by agricultural writers. It has the advantage of the latter, in so far as it increases more freely in the roots, and readily produces perfect seeds, the want of which is sometimes complained of in the *A. pratensis*. The next is *Phleum alpinum*, which forms a considerable part of the pasture on the mountains of some of the northernmost parts of Europe, and seems a grass well calculated for pasture in alpine districts. *Poa nemoralis*, *Poa glauca*, and *Poa alpina*, and the variety *vivipara*, are all good grasses; the *P. alpina* is one of our best pasture grasses on poor soil, with a bad climate. Lately I discovered three other grasses, new to Britain, viz. the *Avena plano-culmis* of Schærder, Fl. Germanica, producing a great quantity of foliage; the *Aira lævigata*; and the *Phleum Meichelii*, the *Phalaris alpina* of the German authors: these grasses grow on the very summit of the highest mountains.

The pasture on the mountains, particularly on the summits, is composed of the following grasses :

<i>Eriophorum vaginatum</i>	<i>Carex dioica</i>
" <i>angustifolium</i>	" <i>cæspitosa</i>
<i>Scirpus cæspitosus</i>	" <i>recurva</i>
" <i>pauciflorus</i>	" <i>ampullacea</i>
<i>Melica cærulea</i>	" <i>Micheliana</i>
<i>Nardus stricta</i>	" <i>limosa</i> ; but rare
<i>Aira flexuosa</i>	" <i>panicea</i>
" <i>cæspitosa</i> ; together	" <i>pilulifera</i>
with var. <i>vivipara</i>	" <i>præcox</i>
<i>Agrostis vulgaris</i> , several	" <i>flava</i>
varieties	" <i>teretiuscula</i> ; but
<i>Festuca vivipara</i>	rare
" <i>ovina</i>	" <i>curta</i>
" <i>duriuscula</i> ; and	" <i>stellulata</i>
also var. <i>dumetorum</i>	" <i>pauciflora</i> ; but
" <i>cæsia</i>	sparingly
<i>Poa humilis</i>	" <i>pulicaris</i>
" <i>decumbens</i>	<i>Juncus trifidus</i>
<i>Carex binervis</i>	" <i>squarrosus</i>
" <i>rigida</i>	" <i>articulatus</i>
" <i>fulva</i>	" <i>uliginosus</i>
" <i>Oederi</i>	" <i>spicatus</i>
	" <i>campestris</i>

The pasture in the valleys in the high lands is the same as in the low lands, only with the addition of the *Meum athamanticum*.

Angusshire has some of the best grasses growing native by the sides of the rivers and rivulets : such as the *Alopecurus pratensis*, *Festuca elatior*, *Festuca pratensis*, *Festuca triflora* ; the latter but rare. I have observed, although sparingly, the *Festuca loliacea*. I have of late discovered a non-descript species of *Festuca*, which seems to be equal, if not superior, to almost all the known species. We have also a number of the genus *Poa*, and some non-descript species of that genus. The *poa* furnishes some of the best grasses we are acquainted with, viz. :

<i>Poa trivialis</i>	<i>Poa pratensis</i>
" <i>glauca</i>	" <i>nemoralis</i>
" <i>alpina</i>	" <i>humilis</i>

The *P. alpina* and *P. humilis* form excellent pasture in alpine or barren districts.

As we descend from the high lands, the vegetables are, with few exceptions, the same as in the neighbouring counties : some, how-

ever, are rather of rare occurrence. In several of the woods are to be found the *Ophrys cordata* and *ovata*, *Trientalis europæa*, *Hieracium molle*, *prenanthoides*, *sabaudum*, and *paludosum*; and in the fir woods near Forfar grow the *Hieracium paniculatum*, var. *maculatum*, not yet found in any other part of Britain; together with the beautiful *Trollius europæus*, *Pyrola minor* and *rotundifolia*; and also *Juncus Forsteri*, *Melica uniflora*, *Carex pallescens*, *remota*, *sylvatica*, *lævigata* and *pendula*, *Triticum caninum*, and *Festuca gigantea*. *Milium effusum* likewise occurs: this grass, although never noticed by agricultural writers, promises to be useful, producing abundance of foliage, which is grateful to cattle. By the side of the Isla grow the beautiful *Orobis sylvaticus*; and *Ribes petraeum*, which may prove equal, if not superior, to the *R. rubrum*: also *Ribes Grossularia*; *Vicia sylvatica*, one of the most beautiful of all the British plants; *Lonicera periclymenum*, var. *quercifolium*, and *Viburnum Opulus*, and *Paris quadrifolia*. Likewise the uncommon *Allium carinatum*; this is also found among the rocks; it is of rare occurrence in other parts of Britain. Besides these occur the *Allium ursinum*, *Adoxa Moschatellina*, *Melampyrum sylvaticum* and *pratense*, *Chrysosplenium alternifolium*, *Lysimachia nemorum*, *Campanula latifolia*, *Satyrion repens*, and *Equisetum hyemale*. This last is the plant brought from Holland for polishing wood, and sold to cabinet-makers under the name of *rushes*. There are, further, some rare cryptogamous plants, among which are the following: In the fir woods near Forfar, is the *Dicranum undulatum* and *Hypnum crista-castrensis*, not found any where else in Britain. And in the order Fungi, is *Hydnum auriscalpium*, *repandum*, *sublamellosum* and *imbricatum*, *Helvella caryophyllæa*, *Agaricus cinnamomeus*, *elephantinus*, and *deliciosus*; together with the very poisonous one called by Linnæus *A. muscarius*, and its var. *verrucosus*, with many others. As cattle sometimes eat these, it is possible that they may bring on disease. The singular fungus called *Phallus impudicus*, occasionally appears. *Helvella spathulata* and *Clavaria militaris* are to be found in General Hunter's woods at Burnside, besides a great many others. I may also add the *Boletus perennis*, *versicolor*, *abietinus*, *suberosus*, and *igniarius*: the latter is called *touchwood*, being used for tinder. Also the *Riccia fruticulosa*, with *Jungermannia scalaris*, *albicans*, *ovata* *trichomanes*, and *excisa*.

When the botanist traverses the marshes, and examines the lakes, he will find his trouble amply repaid. In the lakes of

Forfar, Rescobie, and Balgavies, he will meet with the *Typha latifolia*; this is also in a rivulet not far from Pitmues, by the side of the turnpike-road that leads from Forfar to Arbroath. In the lakes of Rescobie and Balgavies, are likewise to be found *Nymphæa lutea* and *alba*, and *Ceratophyllum demersum*; and on their margins *Lysimachia thyrsiflora*: the latter plant, though rare in other parts of Britain, is not uncommon in Angusshire. *Potamogeton perfoliatum*, *lucens*, *crispum*, *pectinatum*, *compressum*, *gramineum*, *pusillum*, likewise occur in these lakes. *Cicuta virosa*, which is one of the most virulent of all the vegetable poisons, grows on their margins. Cattle, when allowed to browse by the sides of the lakes in the winter months, are sometimes deceived, by its smell being very weak at that season; and when once they have eaten it, it generally proves fatal in two or three hours. The late Mr. Dickson of Cloak's-bridge lost three cows in one afternoon by this plant. When the summer is a little advanced, the odour of the plant warns the cattle, and then they carefully avoid it. The *Scirpus lacustris*, the well known rush, so much used for making rush-bottomed chairs, is common; and in the lake called Loch Feithie, is to be found the *Isoetes lacustris*, generally supposed only to be found in alpine lakes. In the lake at Forfar is the *Stratiotes aloides*, which I brought from a great distance, and introduced there about the year 1792: it is now (1811) in great abundance. *Lemna trisulca* is frequent. *Hippuris vulgaris* is also very common; the latter being somewhat interesting to the botanist, as it belongs to the Monandria, or first class of the Linnean system, there being only four other plants indigenous to Britain that belong to that class. At the east end of the Lake of Forfar, in small pools, is to be found the *Utricularia vulgaris* and *minor*, both beautiful plants, and rather of rare occurrence: likewise *Sparganium natans* and *simplex*, *Veronica anagallis*, *Chara hispida* and var. β , and *Ranunculus Lingua*.

In the lake called the Loch of Lintrathen, the beautiful *Lobelia Dortmanna* is in abundance; and the rare *Potamogeton lanceolatum*, only of late known to be indigenous to Britain.

In the marshes are to be found the *Scirpus pauciflorus*, *acicularis*, *sylvaticus*, and *fluitans*; with the beautiful *Parnassia palustris*, so much taken notice of by botanists, on account of its singular nectary, which is figured in every elementary book. The following also occur:

Poa aquatica ; but not common	Galium Witheringii
Carex stricta	" uliginosum
" paludosa	Littorella lacustris
" Micheliana	Centunculus minimus
" Oederi	occurs, but is rare
" limosa	Radiola millegrana
" paniculata	Viola palustris
" teretiuscula	Drosera rotundifolia
" intermedia	Alisma ranunculoides
" curta	Peplis portula
Scutellaria galericulata	Vaccinium oxycoccus, or
Eriophorum vaginatum	cranberry, the fruit of
Pilularia globulifera	which is brought in
Hydrocotyle vulgare	quantity from the north
" inundata	of Europe, and used for
	making tarts

In the Moss of Restennet formerly grew the *Schœnus mariscus*, the only place I have seen it in Angushire ; but it is now entirely lost there. The *Chara hispida* grows in pools in the same moss ; and there I discovered, in 1791, that truly rare and beautiful grass, the *Eriophorum alpinum*, the first and only time it has been found in Great Britain. I am sorry, therefore, to say, it has been extinct there for these several years past, and that at present we know of no British habitat for it : it is found on the mountainous heaths of Germany, Denmark, Sweden and Norway.

In the marsh called the White Mire, near Forfar, I discovered in 1807 the *Arundo stricta* of Schræder's F. Germ., and the *Arundo neglecta* of Ehrhart, being the only place where it has been found in Britain ; but I am sorry to say it will be soon entirely lost, by the draining of the marsh. This reed produces a great quantity of foliage, and might prove a grass of considerable utility to the farmer in marshy grounds ; it is much more promising in its appearance than the rest of the reed family. There is also the *Eriophorum polystachion*, the only place I have seen it in Angushire ; and the *Carex filiformis* and *Galium Witheringii*. In the ditches are the *Potamogeton fluitans* and *heterophyllum*, both only of late years known to be natives of Britain ; and in the marshes grows also the *Saxifraga aizoides*.

Some rare mosses also occur, among which are the following :

Polytrichum aloides	Bryum ventricosum
" gracile	" turbinatum
" attenuatum	" sericeum
" nanum	" hornum
Bryum dealbatum	" bimum

Bryum compactum	Hypnum dendroides. This
Dicranum heteromallum	is every year to
" strictum	be found with
" glaucum	fruit near
" pellucidum	Forfar, though
" adiantoides	the fruit is
" flexuosum, var.	accounted rare
fragile	" scorpioides
" osmundioides	" molluscum
Hypnum stellatum	" commutatum
" revolvens	" rugosum
" cuspidatum	Splachnum ampullaceum
" cordifolium	" ovatum
	" fastigiatum

In a marsh, near Colonel Kinloch's of Logie, I discovered in 1810 the *Iris xiphioides*, new to Britain: it was growing among *Carices* and *Juncus effusus* and *articulatus*, in a situation where it had never been cultivated.

In the Moss of Cassens is the *Polytrichum strictum* of the Banksian Herbarium, the same as Sir Joseph Banks had from Iceland: it is not the species described by British authors, which is probably no more than a variety of *P. commune* or *juniperinum*, as Dr. Smith informs me, who is in the possession of the Linnean Herbarium, and has access to the Banksian also.

The following is a list of the more remarkable plants to be found in the low parts of Angusshire.

Ligustrum vulgare; near	Poa alpina; by the side of
Tannadice	the rivers Esk and
Circea alpina; and var. β	Isla
intermedia	" glauca
" lutetiana; near	" compressa
Finhaven	Briza media, var. with a
Veronica officinalis, var. β	white panicle
of Linnæus;	Festuca myurus
perhaps the	Bromus multiflorus
allionii of	" secalinus
Smith	" pratensis
" montana; on the	" arvensis; but rare
banks of the	* " tectorium
Esk	Avena strigosa
Salvia verbenaca; near	" flavescens
Dundee	" pubescens
Valeriana locusta	" pratensis
Aira scabro-setacea of	Lolium temulentum
Knapp's Gramina	" arvense
Britannica	Galium erectum

Galium mollugo
 " *boreale*
 " *verrucosum* of
 Smith's Pro-
 dromus Floræ
 Græcæ; new to
 Britain
 " *spurium*; near
 Forfar: it has
 been found in no
 other place in
 Scotland

I have also found
 another species
 of *Galium* near
 Kinnaid, which
 seems a non-de-
 script, coming
 near the *Galium*
Austriacum of
 Jacquin's Flora
Austriaca

Cuscuta Europea; gene-
 rally on flax, and seems a
 very destructive weed;
 it mats it altogether like
 a parcel of matted hair
Sagina apetala; but rare
 in Angusshire, though
 common in some other
 parts of Scotland

Lithospermum officinale
 " *arvense*, seems to
 be brought
 along with the
 seed of wheat,
 as it is become
 very common
 of late years,
 since the
 culture of
 wheat became
 more general

Anchusa sempervirens

Cynoglossum officinale; but
 chiefly near
 to the sea
 " *sylvaticum*;
 west from
 Dundee,
 rare

Symphytum officinale; and
 var. *fl. rubro*
 " *tuberosum*

Primula elatior; near Glam-
 mis

Anagallis arvensis

Convolvulus arvensis; com-
 mon near
 Dundee

" *sepium*

Campanula glomerata

Viola hirta

" *odorata*

" *lutea*

Verbascum Thapsus; and
 var. *flore albo*; the latter
 near Airly Castle

Atropa belladonna; this is
 to be found in the Den of
 Bonnetown, near Mon-
 trose: it is one of our
 strongest vegetable
 poisons. Its beautiful
 shining black berries,
 about the size of a small
 cherry, and not disagree-
 able to the taste, often
 allure children and
 unwary people to eat
 them, and they sometimes
 prove fatal. Dr. Smith
 assures us, that when it
 has been for any length of
 time in the stomach, it is
 impossible to save the
 unhappy patient from
 falling a victim, as no
 antidote is yet known; he
 adds, that all acids and
 alkalis, milk and oils, are
 alike ineffectual, as it
 makes its principal attack
 on the nervous system

Solanum Dulcamara

Chironia centaurium; to the
 west of Dundee

Chenopodium murale; rare
 " *Bonus-*

" *Henricus*

" *polysper-*
mum; rare

- Ulmus montana*
 " *campestris*
Gentiana amarella
 " *campestris*
Daucus Carota
Oenanthe fistulosa; to the west of Dundee
Scandix odorata; but always near houses
 " *pecten Veneris*
 " *anthriscus*; but rare
Chærophyllyllum tumulū; but rare
 * " *aureum*. I discovered this plant some years ago by the side of corn fields between Arbroath and Montrose; it was till then unknown to be a native of Great Britain
 " *aromaticum*. I discovered this plant in summer 1810, by the side of the river called Lunan and Vennie, not far from Guthrie, in a truly wild state; new to Britain
Carum Carui. The most common umbelliferous plant near Arbroath: there is no doubt of the plant being indigenous there
Pimpinella saxifraga; and also var. β *dissecta*
Viburnum Opulus
Sambucus Ebulus
Allium arenarium
 " *vineale*; near Dundee, hard by the sea side
Tulipa sylvestris; not far from Brechin
Convallaria majalis; near Inchewen, parish of Tannadice
Juncus glaucus
Rumex sanguineus
 " *palustris*
 " *acutus*
Trientalis europæa
Epilobium angustifolium
 " *hirsutum*; but rare
Vaccinium Vitis-Idæa
Polygonum Bistorta
 " *viviparum*
 " *minus*
Adoxa Moschatellina
Dianthus Armeria; on fields near the seat of Charles Gray, Esq., of Carse, the only place I have seen it in Scotland: I believe, indeed, it has been found nowhere else
 " *deltoides*. This beautiful plant grows on the north bank of the Lake of Forfar, as also on dry ground near the north-west corner of the Lake; and on banks by the sea, to the east of Arbroath
Silene anglica; but rare
 " *noctiflora*; in sandy corn fields near the Havens or Hains, by the sea side, the only known habitat in Scotland, where it can be reckoned truly indigenous

- Stellaria nemorum*
Sedum Telephium
 " *villosum*
 " *album*; and
 " *reflexum*; both on
 roofs of houses in
 Forfar
 " *anglicum*; on rocks
 near Dundee
Lychnis Flos-Cuculi, flore
 albo
 " *Viscaria*, and var.
 flore albo; on
 dry banks near
 Airly Castle
Cerastium tetrandrum; on
 roofs of houses
 in Forfar;
 common on
 the sea coast
 " *arvense*
 " *aquaticum*; near
 Dundee, but
 rare
 **Spergula maxima*; *nova*
 species
 subulata
Sempervivum tectorum; on
 house-tops
Prunus Padus
 " *domestica*; hedges
 " *insititia*
Pyrus communis
 " *Malus*; both in
 hedges near
 Glammis
Spiræa salicifolia
Rosa tomentosa
 " *scabriuscula*
 " *collina*
 " *cæsia*
Rubus saxatilis
 " *corylifolius*
 And a new species.
 It grows near the
 waterfall called the
 Reeky Linn, on
 the water of Isla
Potentilla argentea. I ob-
 served this
 plant on rocks
- not far from the
 Loups of
 Kenny, near
 Airly Castle,
 but very rare;
 but common on
 rocks on Seed-
 lay Hills
Potentilla reptans; near
 Arbroath, rare
 " *verna*; on rocks
 near Dundee
Geum rivale, var. β of Flora
 Brit. the *Geum* inter-
 medium of *Withering*;
 certainly a distinct species
Comarum palustre var. β
Aquilegia vulgaris
Thalictrum minus; in sandy
 stony places in the high
 lands, and by the sea side
Ranunculus auricomus
 " *bulbosus*, flore
 pleno. I
 found this on
 the south
 bank of the
 Lake of
 Forfar
 " *acris*, flore
 pleno; in
 meadows;
 this variety
 rare
Caltha radicans. I found
 this about the year 1790,
 in a ditch that runs from
 the farmhouse called Hal-
 toun, on the estate of
 Charles Gray, Esq., of
 Carse. Considering it as
 a var. of *C. palustre*, I
 sent it afterwards to
 London, where it was
 ascertained to be a
 distinct species
Teucrium Chamædrys; but
 always near houses
Lamium nova species, which
 I propose to call *inter-*
 medium: it is perfectly

- distinct from all the known species: in cultivated fields
- Galeopsis versicolor*
- Origanum vulgare*, and likewise var. *flore albo*
- Thymus Acinos*; near the village called Welltown, about one mile south of Forfar
- Scrophularia vernalis*; near Lower
- Myagrum sativum*; by some botanists called
- " *Alyssum sativum*
- " *orientale*; in corn fields, and along with the other among flax. These two plants belong to the genus *Alyssum*, on account of their inflated and many-seeded silicles. New to Britain
- " *paniculatum*; near the village of Crichtie: I discovered it there several years ago; it has never been met with any where else in Britain. This is a true *myagrum*, and not an *alyssum*
- Thlaspi arvense*; in corn fields, but rare, as near Brechin and Arbroath
- " *campestre*
- " *hirtum*, var. with smooth silicles, according to Dr. Smith. See *Flora Britannica*. There is little doubt, however, of this being a distinct species, and not a mere variety; it is very distinct in its appearance and in its silicles, which are of a different form. I have cultivated both varieties for several years past, and am convinced they are permanently distinct. Grows opposite to a mill on the south side of the river Esk, near Kinnaird
- Iberis nudicaulis*. This beautiful little plant grows on the estate of Pittruchie, about one mile south of Forfar; it is of rare occurrence in Scotland
- Cardamine amara*; in dens by the sides of rivulets
- Sisymbrium terrestre*
- " *Sophia*; near the confines of Angus-shire, on the Perth road
- Cheiranthus fruticosus* adorns the ruins of several antient buildings; such as the Abbey of Arbroath, and one near the Baikie; also on rocks by the sea shore
- Hesperis inodora*; on banks near Airlly Castle
- Turritis glabra*; near Kinnaird
- " *hirsuta*; on rocks and dry banks

**Turritis* nov. sp.; near Lochlee, in Glen Esk, growing on rocks. I observed it in 1801. Having shewn specimens to Mr. J. T. Mackay of Dublin, when he paid me a visit at Forfar in 1811, he recognised it as the same which he had found in Ireland, and which Dr. Smith has considered as *T. alpina*, Lin.

Brassica campestris; corn fields near Forfar

Geranium sylvaticum, var. flore albo

" *pusillum*
" *sanguineum*

Fumaria capreolata
" *claviculata*

Genista anglica

Ulex nanus

Orobus tenuifolius of Roth;
near Kinnaird

Ornithopus perpusillus;

near Newtyle, but rare
Astragalus glycyphyllos

" *hypoglottis*

Trifolium scabrum

" *striatum*
" *medium*. This

last species produces a number of leaves, and as it thrives well on cold tilly pastures, unfavourable to most other vegetables, it deserves a trial, as its appearance is very

flattering, and cattle and horses are fond of it

L *Botus corniculatus*

" *major*

" *lathyroides*; near Forfar, but rare in other places. All these three thrive well on poor soils, and in cold till, and if they were properly attended to, they would make a valuable addition to our pasture grasses. I named this latter species some years ago

Medicago sativa; near Dundee

Leontodon palustre

Hyoseris minima. There is a remarkable circumstance occurs with regard to this plant: when any muir ground is broken up, although there is no symptom of its having been ever ploughed, this plant never fails to make its appearance the first year; but after the field has been cultivated for some time, it begins to disappear

**Crepis pulchra*; among the debris of the rocks of the hills of Turin and Pittsandy, but very rare

Hypochaeris glabra

Carduus heterophyllus

" *marianus*

" *tenuiflorus*

Tanacetum vulgare

Senecio saracenicus; but always near houses

Doronicum Pardalianches; near Kinnaird

Pyrethrum Parthenium	†Salix nigricans
Anthemis Cotula	" bicolor
" tinctoria	" petiolaris. This
" arvensis	forms a fine tree,
Centaurea Scabiosa, and	and one of our best
var. flore albo	hoop willows
" nigra, var. flore	" vitellina. A good
albo	basket willow
" jacea; found by	" fragilis. The bark is
Mr. Young	sometimes used for
near New-Tyle	tanning
Orchis conopsea	" malifolia
" mascula, var. flore	" argentea
albo	" fusca
" bifolia	† " cinerea
" latifolia, var. flore	" aurita
incarnato	† " aquatica
Satyrion albidum	† " oleifolia
" viride	" hirta
Ophrys ovata	† " caprea
" cordata	† " stipularis
Malaxis paludosa	† " alba
Littorella lacustris	" viminalis. This is the
Salix purpurea	one most used for
" helix	hoops in this
" Lambertiana	country
" rubra	" mollissima
" triandra	Those marked thus †,
" lanceolata.—All these	form good trees
are good basket	Myrica gale
willows	Populus nigra
† " Russelliana, or Bed-	" tremula
ford willow. The	Osmunda lunaria
bark of this species	Anethum fœniculum; on
is the best adapted	rocks on the foreside of
for tanning of any	Seedlay Hills, the only
of the willows	habitat I know for it in
" pentandra	Scotland

Among the pastures in wet soils, and by the sides of rivers, a considerable number of the different species of *Equisetum*, or horse-tail, are to be met with, particularly,

Equisetum arvense

" *palustre*

" *sylvaticum*.—These plants are known

to be hurtful to cattle that browse upon them, probably from the rough angle of their stems acting upon the intestines and injuring them. May not this help to account for some of the diseases which prove fatal to cattle, hitherto not satisfactorily explained?

The genus *Agrostis*, or Bent-grass, is abundant. A Dr. Richardson of Ireland, has written strongly in favour of this family of grasses; but from his publications, which I have of late fallen in with, it pretty evidently appears, that this writer knows not one family of grasses from another, far less is able to distinguish the different species of each family; for his *fiorin grass*, as is evident from his own words, palpably includes every species and variety of British *agrostis*, with couchy roots, or trailing shoots; for he says that it grows in every bog or marsh, and in every soil and situation, from marshes to the tops of hills, and on heaths. How any one could suppose the *fiorin grass* to be exclusively the *Agrostis stolonifera*, I am at a loss to understand; for I had three specimens sent me from gentlemen, who had their plants from Dr. Richardson himself: one of them proved to be the *Agrostis stolonifera*, another the *Agrostis vulgaris*, and a third the *Agrostis canina*. Still more lately, I have received a dried specimen of the *Fiorin grass*, procured from Dr. Richardson's own hands, and sent me from Ireland; and this proves to be another species, viz. *Agrostis alba*. This was nothing else than I would have expected, after reading the Doctor's books. I may here observe, that I have never seen the *Agrostis stolonifera* on dry elevated pastures. Now, what is this celebrated *fiorin grass* of Dr. Richardson? It seems to be a mixture of all the tribe of couchy grasses, held equally in detestation by the farmers and their cattle; and we in Angusshire are apt to judge of the industry of the farmer, in proportion as he has eradicated these grasses, the abundance of which tends so much to depreciate the value of the ground he possesses. In the west of England, the *Agrostis stolonifera* is held in equal detestation by the farmers, and stigmatized by the name of *Black squitch*.

The *agrostides* are the worst to eradicate of any grasses I am acquainted with. Indeed, when they get possession of wettish clay soils, it is the next thing to impossible to get clear of them.

I am bold to say, that if these grasses, so strongly recommended by Dr. Richardson, come really to be introduced among farmers, it will prove the greatest barrier in the way of improvement to agriculture that has ever yet taken place. But when a man like Dr. Richardson, who is plainly neither a botanist nor an agriculturist, comes forward with confidence, recommends to intelligent Scots farmers to lay down their arable fields with a grass which it has been their constant study through life to eradicate, the absurdity is so great, that there is reason to hope that little harm will ensue. The *agrostides* are grasses that totally

destroy rye-grass about the third year after sowing: the fields then become overrun with these grasses, and nothing but necessity ever compels the cattle to eat them. Dr. Richardson adds, that he supposes that the fiorin grass possesses an antiseptic quality, which prevents it from running into putrefaction so soon as other grasses. But I can assure that gentleman, that the agrostides on this side of the Irish Channel possess no such quality; they being here as ready to run into putrefaction as any grass whatever. He likewise adds, that Irish cattle give fiorin the preference to all other grasses: Our cattle, on the contrary, give every other grass the preference to the agrostides.

In digging in dry banks, about two or two and a half feet below the surface, if the soil is good, will be found the *Lycoperdon tuber*, the truffle, or solid puff-ball, so much esteemed by people of rank in England. In trenching up my garden lately, I found several of them. In England, dogs are trained for the purpose of finding them.

PLANTS TO BE FOUND ON THE SEA SHORE.

If the botanist, in taking his tour, begins at the North Water Bridge, the first thing that will arrest his attention is the beautiful grass called *Elymus arenarius*, and along with it he will find the *Festuca rubra*, one of our best grasses; also *Triticum junceum*, *Carex arenaria*, and the *Arundo arenaria*, commonly called Sea-bent: this grass, although much neglected, is not destitute of utility; it is the grass which of all others possesses in an eminent degree the advantage of being furnished with strong running roots, and of growing in loose dry sand, and, by means of these roots, arresting the blowing sands so destructive in some parts of the kingdom. In some counties in England, accordingly, which have a considerable quantity of sandy sea coast, the pulling or destroying of this grass is prohibited. The botanist will also find, though sparingly, the *Phalaris arenaria*. There is also what I take to be a non-descript species of *Aira*, or else the *Aira cristata* β of Linnaeus. The sandy beach is here adorned with the delicate flowers of the *Bunias cakile*, the *Cakile maritima* of Willdenow's *Species Plantarum*.

As the collector comes nearer to Montrose, he meets with the *Thalictrum minus*; and also the *Eryngium maritimum*, whose singular foliage seldom fails to attract the notice of every man of curiosity. In cultivated fields near Montrose, he will find the *Carduus tenuiflorus* and *Lamium incisum*, rather of rare occurrence

in Angusshire. By the road side, in coming from the North Water Bridge, he will find the *Carex divisa*, one of the rarest carices. Near what are called the Back Sands, he will at ebb-tide find plants of the *Zostera marina*; and on those sands, and in salt-marshes among them, *Chenopodium maritimum*, *Triglochin maritimum*, *Scirpus maritimus*, and a variety of *Scirpus lacustris*, *Carex distans* and *vulpina*, *Salicornia herbacea*, and two varieties, which may possibly prove distinct species; also *Arenaria marina* and *pepoides*, *Poa maritima* and *Poa distans*, and *Juncus bulbosus*. I have there observed likewise the *Aster tripolium* which had a magnificent appearance, the flower-stems being eighteen inches high, and strongly resembling some of the beautiful species of that genus from North America.

As the botanical inquirer proceeds along the coast towards Arbroath, he will find the rare moss called *Grimmia maritima*, and among the rocks, he will observe the *Artemisia Gallica* and *maritima*, *Silene nutans*, *Vicia lutea*, and *Reseda lutea*; and in marshes *Schoenus rufus*; and in dens near the shore, is the rare *Allium ampeloprasum*, the only place where it is known to grow in Scotland. Near the promontory called the Red Head, on rocks, is the *Lathyrus sylvestris*, which is a rare plant; *Carlina vulgaris*, *Asplenium marinum*, and *Scolopendrum vulgare*. Near to the town called Achmithie, is the *Asperugo procumbens*, which grows also at the village called Westhaven. Near the village called Torens-haven, is that truly beautiful plant, the *Pulmonaria maritima*, whose elegant glaucous leaves, and bright blue and purple flowers, form a fine contrast among the stones of the beach. Here also grows *Mentha hirsuta* of Linnæus, and the *Gymnostomum obtusum*, which is a rare moss in Scotland. On the beach in several places occurs the *Salsola kali*, one of the plants employed to produce barilla. The elegant *Glaux maritima* is common in many places.

To the eastward of Arbroath, plenty of the *Allium carinatum*, and *Eryngium maritimum* are found; and the *Parietaria officinalis* is in plenty about the rocks and old buildings. The *Eupatorium cannabinum* is not uncommon. Near to Wormiehills, *Poa procumbens* appears, and also a non-descript species of *Festuca*. On the tops of houses at Wormiehills I observed plenty of the *Saxifraga tridactylites*. The *Carum carui*, known by the name of Caraway, is common, but is generally considered as a doubtful native: the botanist will, however, be fully satisfied of its being truly indigenous to this coast; it is indeed by far the most common umbelliferous plant in the neighbourhood of Arbroath; its seeds are often put into loaf-

bread and also among the oatmeal baked into cakes by the peasants; they are also sometimes used for giving a flavour to cheeses. The *Scabiosa columbaria* is plentiful; and the beautiful *Convolvulus soldanella*, whose large rose-coloured flowers makes a fine appearance among the arid sand, will not fail to attract the botanist's notice: this is the only place I have observed these two plants in Scotland. That elegant plant, the *Gentiana amarella*, is common; and *Erigeron acre*, *Phalaris arenaria*, *Pyrethrum maritimum*, *Chenopodium maritimum*, are not unfrequent. The beach is covered everywhere with the *Atriplex laciniata*; and around Arbroath, as well as Dundee, grows plenty of the *Hordeum murinum*.

In proceeding a little further to the westward, the tourist arrives at the Sands of Barrie, which offer an ample field for botanical pursuits. There he will find most of the coast-plants already taken notice of. The *Phalaris arenaria*, and *Erigeron acre*, are there in the greatest abundance. Some years ago I observed there the *Equisetum variegatum*, new to Britain; and about the same time, I discovered a rare moss, which I take to be the *Meesia longeseta* of Hedwig, hitherto unnoticed in Britain: this moss is easily distinguished, from the great length of its pedicles. I have likewise observed on the down, the *Grimmia nigrita* and *Grimmia inclinata*, both rare mosses. *Carex incurva*, and *Ophioglossum vulgatum*, occur here; and this is the only place where I have observed them in Angusshire. A very singular variety of the *Gentiana campestre*, without any flower-stem, is found here. *Sagina maritima* may also be added to the list of Barry rarities; it is a rare species, which I first observed in the Isle of Skye, and on the summit of Bennevis, in 1794.

As the botanist approaches to Broughty Castle, he will observe the *Sedum villosum* and *Sedum anglicum*, the former by no means common in Angusshire; and the *Trifolium ornithopodioides*, a rare plant in Scotland; and between Broughty Castle and Dundee, on the rocks, he will notice the *Spirea filipendula*, and *Potentilla verna*, being the only place I have observed them in Angusshire; together with the *Carduus Marianus*, and a variety with green leaves: *Grimmia maritima*, and *Asplenium ruta muraria*, occur on the same rocks. By the sea side, in marshes, he will find, though sparingly, *Oenanthe crocata*, or hemlock dropwort: this is a strong vegetable poison; several instances are on record of its fatal effects; its roots consist of small round tubers, in bundles, like skirrets, and children and the unwary sometimes take them for the roots of the *Bunium*

flexuosum, the earth nuts or earth chesnuts, in Scotland called by the name of *Arnots*.

In the fields by the shore, in several places, is found the *Centaurea intybacea* of Willdenow's *Species Plantarum*. I first distinguished this beautiful and rare plant some years ago: it is new to Britain, and must have been confounded with the *Centaurea scabiosa*, which it very much resembles, and often grows intermixed with. On walls about Dundee is found a variety of *Poa compressa*. On the walls of the old Tower of Dundee, is plenty of the *Asplenium ruta-muraria*, the only place where this little plant is to be found in plenty in Angusshire.

Along the side of the Tay, to the westward of Dundee, may be seen the *Sagina maritima*, *Allium viniale*, *Triglochin maritimum*, *Aster tripolium*, *Poa maritima*, and a new species, which I propose to call *Poa depauperata*, from its starved-like appearance. There likewise grows on the banks of the Tay an uncommon species of *Aira*, which may perhaps prove to be a non-descript. In the woods, *Paris quadrifolia* occurs; and on rocks we find *Asplenium septentrionale*. *Saxifraga nivalis* grows on the higher hills, and should have been formerly mentioned.

The larger plants contained in this List are to be seen in a growing state in my Botanic Garden at Forfar, where I have now the most extensive collection of hardy plants in Scotland.

SEA PRODUCTIONS.

The first to be noticed is the genus *Fucus*, not only on account of the great number of species, but because they are the most conspicuous marine plants, and those generally understood by the term Sea-weeds. The following is a list of such as I have observed in the course of my botanical excursions along the shore:

<i>Fucus sinuosus</i>	<i>Fucus alatus</i>
" <i>sanguineus</i>	" <i>dentatus</i>
" <i>ruscifolius</i>	" <i>laceratus</i>
" <i>membranifolius</i>	" <i>laciniatus</i>
" <i>ovalis</i>	" <i>ciliatus</i>
" <i>siliquosus</i>	" <i>bifidus</i>
" <i>ligulatus</i>	" <i>palmatum</i> ; the <i>dulse</i>
" <i>esculentum</i> ; <i>hen-ware</i>	of this country
of Angusshire	" <i>edulis</i>
" <i>serratus</i>	" <i>phyllitis</i>
" <i>vesiculosus</i> ; and var.	" <i>saccharinus</i>
<i>spiralis</i>	" <i>digitatus</i>
" <i>cerinoides</i>	" <i>bulbosus</i>

<i>Fucus rubens</i>	<i>Fucus confervoides</i>
" <i>crispus</i>	" <i>flagelliformis</i>
" <i>mamillosus</i>	" <i>filum</i>
" <i>canaliculatus</i>	" <i>lycopodioides</i>
" <i>loreus</i>	" <i>subfuscus</i>
" <i>nodosus</i>	" <i>purpurascens</i>
" <i>pygmæus</i>	" <i>califormis</i>
" <i>aculeatus</i>	" <i>articulatus</i>
" <i>coccineus</i>	" <i>opuntia</i>
" <i>plumosus</i>	" <i>amphibius</i>
" <i>rotundus</i>	" <i>hypoglossum</i>
" <i>lumbricalis</i>	" <i>pinnatifidus</i>
" <i>plicatus</i>	

The following species of *Ulva* occur :

<i>Ulva purpurascens</i>	<i>Ulva laciniata</i>
" <i>latissima</i>	" <i>linza</i>
" <i>lactuca</i>	" <i>umbilicalis</i>
" <i>compressa</i>	" <i>fistulosa</i>
" <i>lanceolata</i>	" <i>intestinalis</i>

Of the genus *Conferva*, many species are found, a few of which may be named :

<i>Conferva polymorpha</i>	<i>Conferva verticillata</i>
" <i>pilosa</i>	" <i>capillaris</i>
" <i>rubra</i>	" <i>funicula</i>
" <i>comoides</i>	" <i>elongata</i>
" <i>rupestris</i>	" <i>nodulosa</i>
" <i>glomerata</i>	" <i>diaphana</i>
" <i>confervicula</i>	" <i>fucoides</i>
" <i>littoralis</i>	" <i>coccinea</i>
" <i>æruginosa</i>	" <i>villosa</i>
" <i>scoparia</i>	" <i>repens</i>
" <i>purpurea</i>	" <i>atro-rubescens</i>

The following species are also to be met with in fresh water, and on damp walls, or on the ground :

<i>Conferva velutina</i>	<i>Conferva amphibia</i>
" <i>atro-virens</i>	" <i>ocracea</i>
" <i>fracta</i>	" <i>sordida</i>
" <i>gelatinosa</i>	" <i>lucens</i>
" <i>atra</i>	" <i>decorticans</i>
" <i>fluviatilis</i>	" <i>limosa</i>
" <i>purpurea</i>	" <i>fontinalis</i>
" <i>aurea</i>	" <i>nitida</i>
" <i>rubiginosa</i>	" <i>rivularis</i>
" <i>frigida</i>	" <i>muralis</i>
" <i>flexuosa</i>	

This latter species grow on damp walls in crowded cities, and sends forth a fragrant smell. Dr. Smith thinks it may have a tendency to correct the bad air in such places; it colours the wall of a green colour, but its filaments are so fine as hardly to be seen with the naked eye.

The marine plants, although many of them are extremely beautiful, are neglected or overlooked by the greater part of mankind; yet they most certainly are highly useful in the economy of Nature, although we may be ignorant of their uses. We evidently see that they give shelter to many of the smaller tribes of marine animals, and a number of others are spawned upon them, and receive from them their nourishment during the first stages of life. Others, again, seem to depend almost entirely upon them for nourishment, as they are attached to them through life: Such, for instance, is the *Lepas striata*, some of the genus *Serpula*, and some of the Zoophyta, as the *Flustra*, *Sertularia*, &c. The beautiful *Patella pellucida* I have often observed on the larger species of fuci; the animal that inhabits that shell seems to derive a great part of its nourishment from that tribe of vegetables. The following are esculent, viz. the *Fucus palmatus*, known by the name of *dulse* or *dulse*: The crispus and mamillosus are eaten among it: the *F. pinnatifidus*, known by the name of *pepper-dulse*: the *F. esculentus*, which is known by the name of *hen-ware* on the Angusshire coast: *F. edulis*, which is eaten promiscuously along with *F. palmatus*; and the stems of the *F. digitatus* and *F. saccharinus*, which are sold under the name of *tang* or *tangle*. Many of the fuci are eaten by cattle; and the whole of them are known to make excellent manure.

In some parts of Scotland, where they are extremely abundant on the shores, they are manufactured into kelp. The *F. vesiculosus*, *nodosus*, and *serratus* are principally used for that purpose; and on that account, Dr. Garnet, in his Tour through the Highlands, informs us, that in the Isle of Mull, some small farms which a very few years ago were let for L. 40 are, now let for L. 300 *per annum*.

The *F. vesiculosus* is strongly recommended by Dr. Russell in diseases of the glands. He says it is extremely serviceable in dispersing all scorbutic and scrofulous swellings. He recommends rubbing these with the vesicles, bruised in the hand till the mucus has thoroughly penetrated the parts, and afterwards washing the parts with sea water. He also says that scirrhoties in the mammæ have sometimes been dispelled by this treatment.

The many *Confervæ* growing in stagnated pools and ditches, give out a great deal of oxygenous air from their extremities, and hence tend to prevent putrescency in the waters during the summer months; and it is probable that the numerous *Fuci*, *Confervæ* and *Ulvæ*, are placed by the hand of Providence in the deep, in order to assist in preventing that vast collection of water from becoming putrid.

I shall conclude my observations on these tribes of vegetables, with the words of the celebrated Mr. Turner of Yarmouth, who has written a Synopsis of the British *Fuci*, and is publishing a more extensive work, with highly finished figures of all of them. "I can assure the philosophic naturalist (he says), that while the more stupenduous works of the Divine Hand arrest the attention of even the most careless observer, and in a language equally understood by all ages and all nations, declare the glory of God; these humble vegetables will, by the inquisitive mind, be found by no means wanting in affording additional proofs, both of the wisdom and beneficence of the Great Creator."

Having thus taken notice of the vegetables which are to be found in Angushshire, and such as are natives of the sea which washes it, or are thrown occasionally on the shore, (at least such of them as have fallen under my observation), I shall next take notice of the *Zoophyta*, which are the connecting link between the vegetable and animal kingdom. The chief of these are:

Sertularia	thuja	Sertularia	muricata
"	halecina	"	uva
"	loricata	"	myriophyllum.
"	pumila		Of this I have
"	operculata		only found one
"	geniculata		specimen on
"	lendigera		this coast
"	falcata	"	dichotoma
"	eburnea	"	setacea
"	rosacea	"	spinosa
"	tamarisca	"	polyzonias
"	abietina	"	fastigiata
"	cupressina	"	syringa
"	argentea	"	avicularia
"	rugosa	"	scruposa
"	pluma	"	reptans
"	antennina	"	frutescens
"	volubilis	Pennatula	phosphorea
"	cuscuta	Corallina	officinalis
"	filicula	"	elongata

Corallina rubens	near Forfar. I
Tubularia ramosa	have observed it
" indivisa	in the Lake of
" muscoides	Rescobie, and
" fistulosa	also near Brig-
Cellepora pumicosa	town
Millepora foliacea	Flustra foliacea
" polymorpha	" truncata
Alcyonium digitatum ;	" pilosa
called <i>dead</i>	" chartacea
<i>mens' toes</i>	" carbacea
" schlosseri	" dentata
" gelatinosum.	" bullata
This, by some	" membranacea
authors, is	Hydra viridis, and
made an Ulva	" grisea; the common
" ascidioides	polypi. These
Spongia tomentosa	two species are to
" stuposa	be found in
" oculata	ditches in the
" palmata	neighbourhood of
" lacustris. This is	Forfar
not unfrequent	

Of the order *Infusoria*, among many, the following may be noticed:

Vorticella rotatoria	is called the Dam
Trichoda cometa	at Forfar: it is
Paramecium aurelia	only visible to the
Cyclidium glaucoma	naked eye when
Librio aceti	the sun shines,
Veucophra fluida	and then the
Volvox globator. This	water seems
animal is remark-	tinged of a green
ably common in	colour with these
the summer	minute animals
months in the old	Monas lens
tan-pits near what	Enchelis seminulum

It is scarcely necessary to mention, that the animals belonging to this order for the most part require a microscope to detect them, being so small as to elude the naked eye.

MAMMALIA.

Of the *Mammalia* class we have no animals of the order *Primates*, but two, viz.

Vespertilio auritus; eared	Vespertilio murinus;
bat	common bat

Of the order *Fera*, we have the following :

Phoca vitulina ; common seal	was upwards of thirty years ago
„ barbata ; great seal	Mustela vulgaris ; common weasel, or
Mustela lutra ; common otter : is not unfrequent on the banks of some of the rivers	Whitret ; not unfrequent
„ foina ; common martin. This is rather a rare animal in Scotland ; one of them was shot in the Wood-hill of Glamis in the year 1808	Ursus meles ; the badger, or Brock, is rather rare in Angussshire
„ putorius ; <i>foumart</i> , or polecat	Talpa europæa ; common mole. I have seen a beautiful variety of a pure white colour, and another variety of a dun colour : both varieties may be considered as of rare occurrence
„ erminea. This animal is rare in Angussshire : I never saw but one, which was near the Mill of Brathens, about four miles north of Brechin ; this	Erinaceus europæus ; hedgehog. This animal was formerly rare in Angussshire, but of late years it has appeared in tolerable plenty

Of the Order *Glires*, we have the following :

Mus rattus ; the black rat. This is the only species I have seen in the town of Forfar, and it is not rare in all the inland parts of Angussshire ; but it has become very rare in most parts of Britain, and is still becoming scarcer, as the brown rat has nearly extirpated it in many parts of the island	sea-port towns in Angussshire ; a very destructive animal
„ decumanus ; brown rat, or Norway rat. Common in the	Mus musculus ; common mouse. I have seen a variety of this of a pure white colour
	„ sylvaticus ; field mouse.
	„ amphibius ; water rat ; common
	„ agrestis ; short-tailed field mouse. I have seen this species in my garden in Forfar : the female seem very much attached to her young, and will brave

every danger in
order to protect them
Lepus variabilis; alpine or
white hare.
Mountains of
Clova: it is not

near so timid as
the common hare
Lepus cuniculus; rabbit; it
is rare in Angus-
shire; perhaps
hardly a native

Of the Order *Pecora*, we possess but three species belonging to one genus:

Cervus elaphus; the stag:
sometimes to be
found on Clova
mountains, but
rare; and in the
wood of the
Forest Muir, near
Forfar
" *dama*; fallow deer:
it is rare in a
wild state in
Angusshire, but
is in a tamed
state at Kinnaird
and Panmure

Cervus capreolus; the
roe-buck: some-
times to be found
in the woods near
Forfar. I have
seen two or three
of them in these
woods some
years ago: I have
also seen them
on the Seedlay
Hills, and in the
woods around
Glamis

Of the Order *Cete*, we occasionally find the following:

Balæna mysticetus; com-
mon whale;
sometimes on the
coast
" *physalus*; the fin-
fish. I observed
a skeleton of this

species to the
east of Dundee
two years ago
Delphinus phocæna; the
porpoise
" *delphis*; the
dolphin

As to the whales that were stranded up the Frith of Tay, I cannot positively say what species they belonged to, as I had no opportunity of seeing them. From the description given of them, they appear to have been of the kind first distinguished by Mr. P. Neill, (in his *Tour to Orkney*), by the name of *Ca'ing whale*, and afterwards figured and described by Dr. Traill of Liverpool, (in Nicolson's *Journal*), under the title of *Delphinus melas*.

BIRDS,

The *Ornithology* of Angusshire might furnish materials for a volume. I shall, however, very much compress my remarks on the subject.

Of the Order *Accipitres*, we find a considerable number :

- Falco albicilla*; the erne : on the mountains of Clova, and by the head of the West water : there is a rock near the head of it called the *Erne skellie*, where these birds generally breed
- " *ossifragus*; the sea eagle, is to be seen sometimes on the coast
- " *chrysaëtos*; golden eagle : mountains about the head of Clova
- " *fulvus*; ring-tailed eagle. I observed one of these on Wirron Hill, about twelve miles north from Brechin in 1797
- " *milvus*; the kite, or *Gled*
- " *ater*; black eagle : on heaths and low hills
- " *buteo*; the buzzard. In a nest of one of these birds in the wood at Newmill, belonging to Colonel Kinloch, on breaking an egg, the bird contained in it had two heads
- " *apivorus*; honey buzzard
- " *aeruginosus*; moor buzzard : on heaths. I have seen this species on the hills of Turin and Pitscandly

- Falco palumbarius*; the gosshawk. This bird is not very common in Angus-shire
- " *gentilis*; gentle falcon : on our high mountains
- " *peregrinus*; peregrine falcon. I remember of seeing one of this species in the possession of the Laird of Balnamosh's grandfather, and of his servants hunting with it about the year 1771. It is recorded of one of this species that eloped from its master in the vicinity of Forfar, on the 24th of October 1772, with four heavy bells on its feet, that it was killed on the morning of the 26th at Mostyn in Flintshire. This shews the great rapidity of its flight
- " *candicans*; gyrfalcon. I observed one of this species on the estate of Mr. Robertson Scott of Hedderwick in September 1810; but I rather think it is rare
- " *cyaneus*; hen-harrier. I have seen this species several times in the neighbourhood of Forfar

Falco pygargus; the ring-tail: not unfrequent
 " tinnunculus; the kestrel. This species is called often in Angusshire, by the country people, *Willie whip the wind*
 " nisus; the sparrowhawk: not unfrequent
 " subbuteo; the hobby: it is rather rare

Strix otus; horned owl
 " brachyotus; short-eared owl: on the mountains of Angusshire
 " flammea; white owl: common
 " ulula. I saw this species in the woods at Balnamoon, where they used to hatch every season
 Lanius rufus; wood-chat

Of the Order *Picæ*, there occur the following:

Corvus corax; the raven: on the mountains
 " corone; carrion crow
 " frugilegus; the rook: common
 " cornix; the hooded crow. These birds were much more common some years ago than they are now
 " monedula; the jackdaw
 " glandarius; the jay. Within these few years they have frequented the woods about Forfar, but formerly they were not to be seen: they are common about the woods of Glamis, Brigtown, and Kinnettles
 " pica; the magpie

Corvus graculus; the Cornish chough: on the mountains of Clova
 Cuculus canorus; cuckoo
 Picus viridis; green woodpecker
 " medius; middle spotted woodpecker
 " minor; lesser spotted woodpecker
 Sitta europæa; nut-hatch. One of this was brought me from the woods near Tannadice in 1807
 Alcedo ispida; the common king's-fisher. This beautiful bird is sometimes seen in the wood of Glamis and in the wood of Newmill
 Certhia familiaris; creeper. I have seen this bird among the woods by the side of the water of Esk

Of the *Anseres*, we can boast a considerable number :

- | | |
|--|---|
| <p><i>Anas cygnus</i> ; wild swan.
 A few pairs of these visit the lakes in the neighbourhood of Forfar ; at least I have observed them in 1809 and 1810 : they are often to be seen in the lake called the Loch of the Garth, between Forfar and Kirriemuir
 " <i>olor</i> ; tame swan : they are occasionally kept by gentlemen : two of them were long kept in a lake called Loch Feithie, by George Dempster, Esq. of Dunnichen
 " <i>tadorna</i> ; shieldrake : not unfrequent in the winter season near the river Esk
 " <i>fusca</i> ; velvet duck : sometimes to be seen on our coast
 " <i>anser</i> ; wild goose
 " <i>segetum</i> ; bean goose
 " <i>bernicle</i> ; the brent goose
 " <i>mollissima</i> ; eider duck, or <i>Dunter</i>
 " <i>clypeata</i> ; shoveler
 " <i>streptera</i> ; the gad-wall, or grey. I have seen this species in the lakes of Rescobie and Balgavies
 " <i>clangula</i> ; the golden-eyed duck
 " <i>penelope</i> ; the wigeon : in the lakes of Rescobie and Balgavies</p> | <p><i>Anas glacialis</i> ; long-tailed duck : on the coast
 " <i>ferina</i> ; the pochard : this is rare
 " <i>querquedula</i> ; the garganey, or summer teal : in the lake of Forfar
 " <i>crecca</i> ; teal duck : lake of Forfar
 " <i>boschas</i> ; wild duck
 " <i>fuligula</i> ; tufted duck : in the lakes
 <i>Mergus merganser</i> ; the goosander : on the coast
 " <i>serrator</i> ; red-breasted goosander : coast
 <i>Alca arctica</i> ; puffin : on the shore
 " <i>torda</i> ; razor-bill : on the coast
 <i>Procellaria pelagica</i> ; stormy petrel, called by the sailors <i>Mother Carey's chicken</i>
 <i>Pelecanus carbo</i> ; the corvorant, or scart : some of these birds occasionally visit the lake of Forfar, and sometimes sit for a whole day on the stakes driven into the lake for dragging marl
 " <i>graculus</i> ; the shag : on the coast
 " <i>bassanus</i> ; the gannet, or <i>Solon goose</i>. This is sometimes to be</p> |
|--|---|

	seen on the coast	Larus <i>nævius</i> ; the wagel
Colymbus	grylle; the spotted guillemot	" <i>marinus</i> ; black-backed gull
"	minor; lesser ditto	" <i>fuscus</i> ; the herring gull. This species is easily tamed: I once kept one of them for three years
"	troile; the scout, or foolish guillemot	" <i>ridibundus</i> ; black-headed gull. In Angusshire it is called <i>pictarny</i>
"	arcticus; black-throated diver: on the coast	" <i>parasiticus</i> ; the arctic gull
"	stellatus; speckled diver	" <i>crepiditatus</i> ; black-toed gull
"	minor; little grebe. One of these was taken in my garden at Forfar in winter 1807	Sterna <i>hirundo</i> ; the sea swallow. In Scotland, particularly in Angusshire, it is called <i>Willie Fisher</i> : common on the water of Esk
Larus	<i>rissa</i> ; kittiwake	" <i>minuta</i> ; the lesser sea swallow
"	<i>tridactylus</i> ; the tarrock, or three-toed gull	" <i>fissipes</i> ; the black tern: common on the sands of Barry
"	<i>hybernus</i> ; winter gull	
"	<i>canus</i> ; common gull	
"	<i>erythropus</i> ; brown-headed gull	

Of the Order *Grallæ*, we have the following:

Ardea	<i>major</i> ; common heron. This bird builds on trees in the wood of Newmill	Scolopax <i>phæopus</i> ; whimbrel. Along with the curlew
"	<i>stellaris</i> ; the bittern. One of these was shot in the White Mire, near Forfar, in 1789: it is sometimes to be seen in the lake of Rescobie, but it is a rare bird	" <i>rusticola</i> ; woodcock
Scolopax	<i>arquata</i> ; curlew: breeds on the mountains	" <i>gallinago</i> ; the snipe
		" <i>gallinula</i> ; jack-snipe
		" <i>glottis</i> ; green-shank: sometimes on the coast
		" <i>calidris</i> ; red-shank: breeds on heaths near Forfar

Scolopax lapponica ; red godwit ; a rare bird with us	Charadrius himantopus ; long-legged plover. I
„ ægocephala ; common godwit	once saw one bird of this
Tringa vanellus ; the lap- wing : called in Angusshire	species on the mountains of Clova : I
Teuchet ; they are not near so numerous as they were some years ago	have never observed but another, which was on Ben-Lawers, in Perthshire, in August
„ interpres ; the turn- stone	1793 : it is a rare bird, and I believe but few natural- ists have seen it alive
„ cinerea ; ash- coloured sand- piper	Hæmatopus ostralegus ; the sea-pie : frequent by the side of the Esk
„ hyperborea ; red phalarope	Fulica chloropus ; common water-hen
„ hypoleucos ; com- mon sandpiper, or sand lark	„ atra ; common coot
„ cinclus ; the purre	„ aterrima ; greater coot. The above three in the lake at Forfar
„ islandica ; red sand- piper	Rallus crex ; the rail, or <i>Corncraik</i>
„ squatarola ; grey sandpiper	„ aquaticus ; water rail
Charadrius hiaticula ; the ringed plover	
„ pluvialis ; golden plover : breeds on the hills	

Of the *Galline* or *Grouse* tribe, Forfarshire possesses,

Tetrao tetrix ; the black cock. Two of these birds were shot on Turin Hill in the winter of 1794 ; they occur also on Clova mountains, but rare	Tetrao attagen ; red grouse or <i>muirfowl</i> . This species is becoming very rare of late years, and if gentlemen do not fall upon means to prevent their destruction, they will certainly very soon become extinct. I have seen more of them
„ lagopus ; the ptarmi- gan : on the high mountains of Clova	

about twenty
years ago in
walking two or
three miles, than

I have of late in
walking sixty
miles
Tetros perdix; the partridge

Of the Order *Passeres*, a great variety occurs:

Columba ænas; common
pigeon:
frequent on
the rocks by
the sea side
" *palumbus*; the
ring-dove, or
wood pigeon.
This bird is
easily tamed:
I have one of
them which
for the most
part lives in
my house; it
is so tame as
to eat out of
one's hand
Alauda arvensis; the sky-
lark
" *pratensis*; the tit-
lark
" *arborea*; the wood-
lark: in woods
near Forfar
Sturnus vulgaris; the star-
ling: frequent
on the mountains
" *cinclus*; water
ouzel, or *Water*
craw
Turdus viscivorus; the
missel-thrush
" *pilaris*; the field-
fare
" *iliacus*; red-wing
" *musicus*; the *mavis*,
or throstle
" *merula*; blackbird
" *torquatus*; ring-
ouzel: on the
mountains

Ampelis garrulus; the
Bohemian chatterer
Loxia curvirostra; the
cross-bill; and
" *enucleator*; pine
cross-beak. These
two species of
Loxia have come
in great numbers
to the woods of
Glammis and
Lindertis, and
totally destroyed
the whole larch,
and fir cones for
these two years
past
" *pyrrhula*; the
bullfinch
" *chloris*; the green-
finch. A few
years ago I
observed a white
variety of this
species near
Forfar: I observed
it for two winters
Emberiza nivalis; snow
bunting, or
snow flake. I
once tamed
one of these
birds: it
seemed to live
very well in
confinement,
and was
cheerful; it
lived with me
for four years
" *mustellina*; the
tawny bunting

Emberiza miliaria; common bunting	Motacilla alba; the white wagtail
" citrinella; the yellow hammer. This beautiful and innocent bird is terribly persecuted by the young children in many parts of Scotland, under the name of <i>Yellow-yite</i> , or <i>Yaldring</i>	" flava; the yellow ditto
" schœniclus; reed bunting: com- mon near the lake of Rescobie	" œnanthe; the wheat-ear
Fringilla cœlebs; chaffinch	" rubetra; whin- chat
" montifringilla; the brambling	" rubicola; stone- chatterer
" carduelis; the goldfinch. This bird has never been plentiful since the hard winter of 1795, which destroyed many	" atrocapilla; the black-cap
" linota; the linnet	" rubicula; the red- breast
" domestica; the sparrow	" troglodytes; the wren
" montana; moun- tain sparrow: on the moun- tains of Angus- shire	" regulus; the golden-crested wren. This is a rare bird in Angusshire
Motacilla modularis; hedge- sparrow	" trochilus; yellow wren
" salicaria; reed sparrow: among reeds by the sides of the lakes; but not common	" baarula; grey wagtail. I have seen this near Forfar
	Parus major; great tit- mouse, or <i>ox-eye</i>
	" cœruleus; the blue tit-mouse. This bird hatches in my garden every year
	" ater; the cole-mouse
	" biarmicus; the bearded tit-mouse
	Hirundo rustica; the chim- ney swallow
	" urbica; the martin
	" riparia; the sand martin
	" apus; the swift
	Caprimulgus europæus; the goat-sucker: woods near Forfar

AMPHIBIA.

In Angusshire we have but few of the class *Amphibia*.

Of the Order *Reptilia*, we have :

<i>Rana bufo</i> ; the common toad	Arbroath, in June 1797 ; it was about three times the size of the <i>Rana temporaria</i> . I suppose it is an inhabitant of salt marshes, and rare
" <i>temporaria</i> ; common frog. I have seen numbers of a beautiful variety of this species in the alpine rivulets on the mountains of Clova : they appeared as if trimmed with silver lace. I once observed one of this variety in my garden in Forfar some years ago	<i>Lacerta palustris</i> ; the warty lizard
" <i>esculenta</i> ; the eatable frog. I have seen a few of this species about the lakes, but rather rare	" <i>aquatica</i> ; the water ditto
" <i>gigantea</i> ; the gigantic frog of Lightfoot. I observed one of these about five miles east of	" <i>agilis</i> ; the nimble lizard ; common on the Highland mountains, where it sometimes grows to a large size
	" <i>vulgaris</i> ; common ditto : this species, as also the others, is called in Angus-shire by the name of <i>Ask</i>

Of the *Serpentes*, there occurs only the following, and none of them are common.

<i>Coluber berus</i> ; the viper, or <i>Adder</i> . This animal is now becoming very rare : we have it near the West Water, as at the foot of Wirron Hill, twelve miles north of Brechin, and the hills of Glenugg	rocks at the head of Lochlee, in Glenesk, in 1795, the only one I have seen
" <i>prester</i> ; the black viper. I observed one of this species at the foot of the	<i>Anguis eryx</i> ; the blue-bellied snake, or adder ; on the mountains, but rare
	" <i>fragilis</i> ; the blind-worm. Several of this species were found in the Moss of Res-tennet, near Forfar

Of the Order *Nantes*, the sea and rivers afford the following :

Tetrodon truncatus; the oblong sun-fish: sometimes on our coast	Raia oxyrhinchus; sharp-nosed ray
" mola; the short sun-fish: on the coast, but rare	Petromyzon marinus; the lamprey: in the sea, and sometimes in rivers
Syngnathus ophidion; the little pipe-fish	" fluviatilis; lesser ditto: in lakes and rivers
" acus; the longer pipe-fish: on the coast, but very rare	" branchialis; the pride: in clear water.
Cyclopterus lumpus; the lump-fish	Lampreys were more common some years ago than at present: a number of the common people were much afraid of them, and many a strange story was told of them. They are called
" liparis; the unctuous sucker	<i>Nine-eyed eels</i>
Lophius piscatorius; the toad fish, or fishing frog, or sea devil	
Squalus canicula; the greater dog-fish	
" catulus; the lesser ditto	
" galeus; the tope	
" vulpes; the sea fox	
" acanthus; the piked dog-fish	
Raia batis; the skate	
" clavata; thornback	

FISHES.

I now proceed to give a sketch of the *Ichthyology* of Angusshire. Of the *Apodal* order, we find :

Muraena anguilla; the common eel	familiar even to the common people; they call it <i>Eve-eel</i>
" conger; conger eel; seemed to be much better known some years ago than at present: the name seems	Anarichas lupus; the sea-wolf: in Scotland called <i>Sea Cat</i> .
	Ammodytes tobianus; the sand-eel

Of the *Jugulares*, the following occur :

Callionymus lyra ; the
gemmeous
dragonet
" dracunculus ;
sordid ditto
Gadus æglefinus ; the
haddock
" morhua ; the cod
" luscus ; the bib
" barbatus ; the
whiting-pout
" minutus ; the poor
" merlangus ; the
whiting
" carbonarius ; the
coal-fish
" pollachius ; the
pollack
" merlucius ; the hake

Gadus molva ; the ling
" mustela ; five-
bearded cod
" tricirratus ; three-
bearded cod
" brosmæ ; the torsk
Blennius gallerita ; the
crested blenny.
One of these
was lately taken
at Acemithie, six
miles east of
Arbroath
" pholis ; smooth
blenny
" viviparus ; the
viviparus
blenny

A considerable number of *Thoracici* occur, particularly

Gobius niger ; the miller's
thumb
Cottus cataphractus ; the
pogge
" scorpius ; the father-
lasher
" gobio ; the bull-head.
This species is
sometimes to be
found in the Esk
Zeus luna ; the opah. I
observed one of this
splendid species cast
ashore on the sands of
Barry
Pleuronectes hippoglossus ;
the holibut.
This species
is sold in
Forfar by
the name of
Turbot
" platessa ; the
plaise
" flesus ; the
flounder

Pleuronectes limanda ; the
dab
" solea ; the sole
" punctatus ; the
whiff
" maximus ; the
turbot
Sparus auratus ; the gilt-
head
" pagrus ; the red gilt-
head. I bought a
few of this species
in Forfar market
in the year 1798 ;
they were taken
near Westhaven
" dentatus ; toothed
gilt-head
Labrus tinca ; the wrasse
" cornubicus ; the
goldsinny
Perca fluviatilis ; the perch
" marina ; the sea
perch
Gasterosteus aculeatus ; the
banstickle

Gasterosteus pungitius; the lesser stickle-back	Scomber trachurus; the scad, or horse mackerel
" spinachia; the greater stickle-back. I have seen several of these on the coast	Trigla lyra; the piper " gurnardus; the grey gurnard " cuculus; the red gurnard. I observed one of this species cast a-shore on the Sands of Barry; and they are taken frequently off Montrose
Scomber scomber; the mackerel	
" thynnus; the albi- core, or tunny: by some called the <i>mackerel-sture</i> , or great mackerel	

Of the Order *Abdominales*, we have the following:

Cobitis barbatula; the loche: in rivers common	taken in the Lake of Forfar of a large size; one was taken in spring 1812, 27 pounds in weight and 4 feet long
Salmo salar; the salmon	
" eriox; the grey. This fish is not near so common as the salmon: it is indeed rather a rare species	Esox belone; sea pike " saurus; the saury pike
" trutta; the sea trout	Mugil cephalus; the mullet
" fario; the common trout	Clupea harengus; the herring
" alpina; the char: in some of our alpine lakes, but rather rare	" pilchardus; the pilchard
" eperlanus; the smelt: in Scotland it is known by the name of <i>Spirling</i> or <i>sparling</i>	" sprattus; the sprat
" thymallus; grayling	Cyprinus phoxinus; the minow. The roach, dace, tench, or carp, which belong to this genus, and are so common in fish-ponds in England, I have never seen in Angusshire
Esox lucius; the common pike. This is often	

INSECTS.

The following are a few of the *Insects* which I have observed in this country, but they are only a few of those to be found.

Scarabæus typhæus	the Forest-mui
" nuchicornis	near Forfar
" fimetarius	Dermestes lardarius
" scrutator	" pello. This
" conspurcatus	" insect is
" granarius	destructive to
" terrestris	books
" sylvaticus	" domesticus
" stercorarius; the	Bostricus polygraphus
dor-beetle:	" typographus: on
When it flies	fir trees near
in the evening	Forfar
with a loud	" scolytus; often
humming	destructive to
noise, it is	elms
thought by the	" piniperda; on
country people	trees near
to presage a	Forfar, which it
fine day	often destroys
" testudinarius:	Ptinus cerevisiæ
very rare	" mollis; destructive
" melolontha; the	to dried plants
cock-chaffer:	" fur; it is a most
flies in the	destructive insect
evening. In	in museums, and
flying it often	I have often
strikes against	experienced its
persons and	mischievous
other objects,	effects
as if blind;	Hister unicolor
and hence	" æneus
comes the	Gyrinus natator
common	Cistela pilula
proverb, As	Byrrhus scrophulariæ
blind as a	Silpha vespillo
beetle	" atrata
" solstitialis. This	" thoracica
species is	Nitidula bi-pustulata
often hurtful	Cassida viridis
to the leaves	" nobilis
of the elm	Coccinella annulata
" nobilis	" bi-punctata
Lucanus parallelepipedus	" 5-punctata
" caraboides. In	" 6-punctata
the wood of	" 7-punctata

<i>Coccinella</i> 9-punctata	large plantation
" 13-punctata	belonging to
" 14-punctata	Mr. Meason of
" 22-punctata	Lindertis, con-
" conglobata	sisting of the
" 14-guttata	Scots fir and
" oblongo-guttata	larch
" bi-pustulata	<i>Curculio pyri</i> . This insect
<i>Chrysomela</i> graminis	is very common
" nemorum	on the fruit trees
" euphorbiæ	of the garden
" tabida	walls of the
" transversa	garden at
" cardui	Kinnardy, and
" fastuosa	does a con-
" vitellinæ. This	siderable degree
species often	of damage
destroys the	<i>Attelabus coryli</i>
leaves of the	<i>Clerus formicarius</i>
willow trees	<i>Cerambyx bajulus</i> . The
in my garden	larva of this
" polygoni	insect
" polita	perforates
" populi	furniture made
" marginella	of fir
" 20-punctata	" arcuatus
" anglica	" coriarius
" aleracea	<i>Leptura aquatica</i>
<i>Limnius</i> æneus of Müller	" simplex
" Volckmari	<i>Lampyrus noctiluca</i> ; the
" tuberculatus, Müller	common glow-worm
<i>Cryptocephalus</i> sericeus	<i>Cantharis viridissima</i>
<i>Auchenia</i> asparagi	" fusca
" cyanella	" livida
<i>Curculio</i> cerasi; found on	" ænea
the cherry and	" bi-pustulata
pear trees,	<i>Elatér</i> sputator
destroying their	" elongatus
leaves	" pectinicornis
" granarius; a de-	" obscurus
structive insect	<i>Cicindela campestris</i>
in granaries;	" riparia
the weevil	<i>Buprestis viridis</i>
" dorsalis	<i>Dytiscus marginalis</i>
" capreæ	" cinereus
" ulicis	" semistriatus
" pomorum; hurtful	<i>Carabus hortensis</i>
to apple trees	" catenulatus
" pini. This species	" ruficornis
has destroyed a	

Carabus vulgaris ; and several others of this genus	Staphylinus riparius ; and some others
Tenebrio molitor	Forficula auricularia ; the earwig : in
Blaps mortisaga	Angusshire
Mordella bi-color	called by the country people
Staphylinus murinus	<i>Horned gollich</i>
" maxillosus	" minor. This is
" chrysomelinus	rather rare
" hypnorum	

Of the *Hemiptera*, may be mentioned the following :

Blatta orientalis ; found in some of the bake-houses in the seaport towns	happily not so common in the inland towns
Gryllus bi-punctatus	Cimex littoralis
" gryllotalpa	" clavicornis
" domesticus. These are sometimes found near bakers' ovens, but rare	" corticalis
" campestris	" betulæ
" viridissimus	" scaraboides
" varius	" baccarum
" cœrulescens	" juniperinus
" stridulus	" prasinus
" bi-guttulus	" bicolor
" grossus	" hyoscyami
Cicada cornuta	" apterus
" spumaria. The larva of this species is the inhabitant on plants of the Cuckoo spit, or as it is called in Angusshire <i>Frog's spittle</i>	" campestris
" viridis	" pratensis
" ulmi	" pini
" rosæ ; and some others	" urticæ
Notonecta glauca	" ulmi
" striata	" lacustris
Nepa cinerea	" stagnorum
Cimex lectularius ; the bed bug : very common in some of the seaport towns, but	" personatus : and some others
	Aphis ; a great number of different species
	Chermes ; a great number of species
	Coccus ulmi
	" pilosellæ
	" caprææ
	" salicis. These two latter very common on some of the willows in my garden, particularly on the Salix vimi- nalis and carinata

Coccus abietis.—A great
many other
species are to be

found in Angus-
shire
Thrips physapus
" juniperina

Of the Order *Lepidoptera*, we have the following :

Papilio napi
" rapæ
" brassicæ. The
larvæ of these
three are very
destructive to
cabbage plants
in gardens, and
render them very
unsightly
" cardamine. This
beautiful species
I have sometimes
seen in my garden
at Forfar
" adusa. This beauti-
ful and rare species
I have seen in my
garden: I have one
preserved which
was taken in it
" hyale
" hyperanthus
" pamphylus
" ægeria
" jurtina
" cardui
" urticæ
" atalanta
" lucina
" paphia
" aglaja. I have one
of these preserved
which I found on
the Sands of
Barry; it is rare
in Angusshire
" argus
Papilio rubi
" phlæas
" linea; with several
other species
Sphinx filipendulæ
" atrapos
" ligustri

Sphinx convolvuli
Phalæna bractea. This
beautiful species
is frequent in
my garden
" viridana
" fagana
" clorana
" scabrana
" quercana
" obliquana
" rosana
" cynosbana
" nemoralis
" pallens
" pronuba
" segetis
" maura. I observed
this species at
Westhaven in
1807
" brassicæ
" oleracea
" citrosa
" cerosa
" euonymella
" pratella
" pascuella
" tapezella
" pellationella
" fascitella. These
two latter
destructive to
woollen clothes
" dodecella
" cembrella
" granella
" quercus
" caja
" coryli
" erminea
" lapricipeda; and
many others of
this numerous
family

Of the *Neuroptera*, we find a number, particularly,

Libellula quadrimaculata	species is very
" vulgata	common about
" depressa	the Lake of
" vulgatissima	Forfar; they
" juncea	live but for a
" puella	single night
" virgo. This	Phryganea nebulosa
beautiful species	" grisea
I have seen	" flavicornis
several times in	" rhombica
Angusshire	" variegata; and
Ephemera vulgata; May-fly	some others
" vespertina	Hemerobius lutarius
" marginata	" perla
" horaria. This	Panorpa communis

Of the Order *Hymenoptera*, the following are found:

Cynips rosæ	Vespa bifasciata
" glechomatis	" vaga; and others
" quercus-folii	Apis centuncularis
" quercus-petoli	" rufa
" quercus-gemmæ	" mellifica; common
" fagi	hive bee
" viminalis	" conica
Tenthredo salicis; and	" annulata
several others	" terrestris
Sirex gigas	" virginalis
Ichneumon. Several	" lapidaria
species of this genus are	" muscorum
to be found	" hypnorum
Sphex sabulosa	" acervorum
" fusca	Formica herculeana
Vespa vulgaris; wasp	" rufa
" parietum	" fusca
" muraria	" rubra
" arvensis	

Of the Order *Diptera*, many species occur:

Oestrus bovis	Tipula plumosa
" equi, &c.	" motitatrix
Tipula rivosa	" littoralis
" crocata	" monilis
" oleracea	" pusilla
" hortorum	" marci
" triangularis	" febrilis
" pratensis	" vernans
" regelationis	" phalanoides
" punctata	" palustris

Musca chamæleon
 " *chalybeata*
 " *similis*
 " *vallata*
 " *Cæsar*
 " *pellucens*
 " *cadaverina*
 " *vomitaria*
 " *domestica*
 " *argentata*. I
 observed this
 species near
 Panmuir
 " *grossa*
 " *tremula*
 " *lateralis*
 " *canicularis*
 " *pluvialis*
 " *cellaris*
 " *meteorica*
 " *putris*
 " *pumilionis*. The
 larva of this
 species is some-
 times hurtful to
 wheat
 " *frit*. The larva of
 this is hurtful to
 barley
 " *cupraria*
 " *aurata*
 " *angulata*
 " *cursitans*
 " *stercoraria*
 " *vibrans*

Musca hyoscyami
 " *germinationis*
 " *onopordinis*
 " *nemorum*
 " *tenax*
 " *fastuosa*
 " *pipiens*
 " *albimana*; and
 several others of
 this extensive
 genus
Tabanus bovinus
 " *tropicus*
 " *pluvialis*
 " *cæcutiens*
 " *autumnalis*.
 These are
 known by the
 name of *Cleggs*
 in Angushire
Culex pipiens
 " *ciliaris*
 " *pulicaris*
Stomoxys calcitrans
 " *irritans*
 " *rostrata*
Conops flavipes
Asilus forcipatus; and
 several others of this
 genus
Bombylius medius
Hippobosca equina
 " *hirundinis*
 " *ovina*

Of the Order *Aptera*, likewise, a number occur :

Lepisma saccharinum
Podura nivalis
 " *aquatica*
 " *fimetaria*; and
 others of this
 genus
Termes pulsatorium; the
 death-watch
Pediculus. Of this dis-
 gusting genus fifty-
 three or more species
 are reckoned natives;
 they are named by the

 animals they inhabit
Pulex irritans. This
 troublesome little insect
 is well known by the
 name of *Flea*: it is
 reported by some authors
 that it has been tamed,
 and has lived six years.
 Its muscular strength is
 so great, that it can leap
 200 times its own length,
 and drag a weight 8 times
 heavier than itself

Acarus reduvius; the tick	Cancer Norvegicus
" ricinus; dog-tick	" pulex
" telarius; often hurt-	" locusta
" ful to plants kept	" atomos
in hot-houses	" stagnalis
" scabiei. This is the	" phalangium. This
insect which	is the Cancer
causes itching in	scorpio of
the disease called	Stewart. I have
the itch	found several of
" lactis	these near the
" muscorum	Sands of Barrie;
" fungorum; and	it is reckoned a
several others of	rare species
this genus	" platychelas of
Hydrachna globator	Pennant, a rare
" grossipes; and	species: I also
some others	found one of this
Phalangium hirsutum	on the Sands of
" grossipes	Barrie
" opilio	Monoculus quadricornis
Aranea diadema	" rubens
" redimita	" pulex
" montana	" longispinus
" domestica	" simus; and
" viatica	several others
" saccata	of this genus
" extensa	Oniscus asilus
" latens	" entomon
Acarus senoculata	" cæstrum
" holosericea	" aquaticus
Cancer pisum	" oceanicus
" longicornis	" assimilis. This
" mænas	species is often
" depurator	to be found
¹ " pagurus; crab, or	among the Fuci
parten	or dulse, when
" araneus	sold at the cross
" horridus. This is	in Forfar
rather a rare	" asellus
species	" armadillo
" bernhardus	Scolopendra electrica
" araneiformis	" forficata
" corrugatus	Julus terrestris
¹ " gammarus; the	" complanatus
lobster	" sabulosus
" squilla; the prawn	" oniscoides; among
" crangon; the	stones on the hill
shrimp	of Finhaven

¹ Both these species are called in Angushire by the name of *Firy tangs*, or *Meg wi' the mony feet*.

WORMS.

Of the Order *Intestina*, the following occur :

Ascaris. There are many of this genus to be found; they inhabit the intestines of every kind of animals	said to cause a dropsical swelling of the abdomen
Scolex lophii. I have a specimen of this animal which was found in the fishing-frog	Gordius aquaticus: in ditches
Strongylus. Of this genus there are two species; one of them found in the horse and the other in sheep	Lumbricus terrestris: earth-worm
Echinorhynchus, and likewise the genera Cucullanus and the Taenia, are found in the intestines, and other parts of many animals, and often get their names from the parts or the peculiar animals they inhabit	" marinus; on the sandy shores
Fasciola is a very numerous family: the Fasciola hepatica is found in the liver of oxen, swine, horses, and sheep, and is	Planaria fusca
	" lactea; both in the Lake of Rescobie
	Hirudo sanguisuga
	" vulgaris
	" complanata. This species is found common in a spring called the South Running Well, near Forfar
	" hyalina
	" bi-oculata. These two latter I observed in the Loch of Lintrathen
	" muricata; inhabits the sea

Of the Order *Mollusca*, we observe the following :

Limax ater; black slug	ashore at the Sands of Barrie
" succineus; red	Aphrodita aculeata; cast on the shore, not unfrequent
" cinereus; great spotted	" squamata
" agrestis; small grey	" lepidota
" flavus; amber ditto	Amphitrite auricoma. I have seen several of this on the shore
Doris verrucosa. I have seen this not unfrequent on the coast. I have a specimen of it preserved	Nereis noctiluca. These animals illuminate the sea, with a brighter splendor than the glow-worm's
" papillosa. I have also a specimen of this	
" argo. I have seen this species thrown	

Nereis pelagica; not un- frequent; I have a specimen of this preserved	Sepia media " loligo. I have seen this species often driven ashore near Montrose
Nais serpentina; common in the small pools of water at the east end of the loch at Forfar, among the Lemna minor and trisulca	Medusa cruciata " capillata " aurita " octopus. They are not unfrequent in the sea; the greatest quantity I ever observed of them was at the village of Achmithie, six miles east of Arbroath
" proboscidea; in marshes,—ponds and ditches near Forfar	Asterias papposa " lacertosa " rubens " seposita; rare " glacialis. I observed what I take to be a non- descript species at Achmithie
Ascidia rustica; in the sea not unfrequent: I have a specimen of this preserved	Echinus spatagus " esculentus
" mentula	
Actinia rufa	
" crassicornis; and some others of this genus	
Lernæa salmonea	
" asellina	
" pectoralis. I have a specimen of this preserved	

Of the Order *Testacea*, we have the following:

Multivalves.

Chiton albus. I observed one of this species on the shore at the Sands of Barrie	Lepas balanus " balanoides " anatifera " striata
" marginatus	Pholas dactylus " crispata

Bivalves.

Mya truncata	Tellina radiata
" arenaria	" donacina
" margaritifera; common in Water of Esk	" ferroensis " rhomboides
Solen vagina	" cornea
" siliqua	" rivalis
" ensis	" carnaria
" legumen	" rugosa
" pellucidus	Mactra stultorum
Tellina fragilis	" solida
" planata	" lutraria

Univalves.

Cardium aculeatum	Turbo littorcius; <i>wilk</i> , or
" echinatum	periwinkle
" edule. This is the	" rudis
common cockle	" cimex; on the Back
Venus gallina	Sands at Mon-
" islandica	trose, not unfre-
" exoleta	quent
" undata	" terebra
Ostrea varia	" perversus
" opercularis	" muscorum
" edulis. The shells	" fontinalis; White
of this are some-	Mire, near Forfar
times thrown on	Helix striatula
the shore	" planorbis
" maxima; but rare	" lapicida
Anomia ehippium	" arbustorum
" cepa	" aspera
" squamula	" ericetorum
Mytilus rugosus	" turturum
" barbatus	" virgata
" edulis; the common	" rufescens
muscle	" nemoralis
" pellucidus	" stagnorum
" modiolus	" stagnalis; in Crook
" cygneus	water, but rare
" anatinus	" palustris
" discors; a rare	" putris
species	" limosa
Cypræa pediculus; at	" auricularia
Lunan Bay	Nerita glaucina
Buccinum lapillus	Patella vulgata
" undatum	" ungarica
" reticulatum	" lacustris
" minutum	" fluviatilis
Strombus pes-pelecani. I	" pellucida
observed this shell on the	Sabella alveolata
Sands of Barrie	" lumbricalis
Murex clathratus; it is rare	Dentalium entalis. I found
with us	this shell, with the animal
Trochus cinerarius	in it, on the sand at
" zizyphinus; but	Lunan Bay
rare	Serpula spirorbis
Turbo neritoides	" triquetra
	" contortuplicata

I have observed a great number of minute shells, of different species, on the moist places on the Sands of Barrie, which would require a magnifier to distinguish them, but never had time sufficient to examine them.

APPENDIX G.

LETTERS OF GEORGE DON.

As in the case of John Mackay, who, like George Don, maintained a correspondence with Sir James Edward Smith, there are no letters in the Smith correspondence in the possession of the Linnean Society from George Don. Don's letters to Mr. N. J. Winch have been referred to several times, and by the kind permission of the President and Council of the Linnean Society, in whose care the Winch correspondence is, I am able to present here copies of these letters, which I do from the standpoint of "*Le style est l'homme même.*" I would like to add that in their reproduction I have been greatly assisted by Mr. B. Daydon Jackson, Secretary of the Linnean Society, who has not only himself transcribed for me some of the MS., but has also collated and corrected the proofs. I make no apology for quoting here (with his consent) his comments, in a letter to me accompanying the collated sheets, for they tell of Don's workmanship as it appears in the letters and also convey his impression of Don after perusal of them—an impression which readers generally will share. He says:—"I have just completed the collation of Don's letters, and am sending them with this. There still are some words which I cannot make out, after long study of them, Don's letters are so badly formed—a, o, u are practically the same, and so on. The letter dated Feb. 18, 1810, is an especially bad specimen; you have seen it, and remember that he has closely packed both sides of a sheet of foolscap with names of plants and remarks, wherever he could find half an inch of blank paper. The task of copying was a hard one, hence the blunders that arose; I hope I have corrected all, but nothing short of a photo. could do justice to the writer. His letters show him eager and enthusiastic, clamorous for help; like all collectors, far from bashful in asking favours, but also unmethodical and careless to the last degree. He is constantly excusing his want of attention to Winch's requests by his having mislaid the last letter."

George Don to N. J. Winch.

Forfar, May 11th, 1802.

Sir,—I received your letter a few days ago, and shall be very glade to exchange plants and specimens—no one likes a faithfull correspondent more than I doe. You mention some good things that is to be found in your neighbourhood, although I have all them except *Ribes petraeum* and *Bartsia Alpina*, although I have found *Bartsia* about 50 miles from Forfar, but could not remove it to grow. But I should be obliged to you to pot and plant it and 2 of *G[entiana]* *Verna* and try to establish them in 2 pots as the only way, and save seeds of *Thalictrum major* and *Cistus marifolius* and specimens, as I have but a weak plant of *Gentiana verna* and *Cistus marifolius*. I should be obliged to you to send a catalogue of all the rare plants within your reach, I mean your botanical excursions, and not to forget the cryptogamous famely, as I think you could assist me in specimens of some of the English hypnoms that I have not found in Scotland, and if I remember I seed some specimens of Lichens that I suspect came from you. When I was on a visit to Mr. Mackay about Sept. last, a new one you had discovered, and imersus, both which I should be glad to have, or any other you may judge rare. But I shall see by your catalogue what is in your power to assist me with. I have laboured hard for this last winter and have made several new discoveries in that intricat part of the science, among which is a new hypnum. I call it in my herbarium *fontenaloides*, and another alpinum which Dr. Smith is to adopt my names for in his *Flora Britanica*, as he by letter informs me, and 3 or 4 new hypnoms which I have affixed no name to as yet. One of them I think of calling *mimosiodes* and another *trichomonoides* as they both belong to the first division, and 2 more I have not thought of names that would be applicable as yet, and a new bryum that comes nearest the *Grimmia cribrosa* of Hedweg, and a new *Gymnostomon* I call *maritima* from its growing near the sea, and a new *Orthotrichum* Dr. Smith is to call *obtusifolium*. I found this on the Bark of a willow tree in the Botanic Gardens while on a visit to our mutual friend Mr. J. Mackay who is no more. In calling back to my mind that worthy man excites painfull sensations in my breast and wound my feelings deeply. Besides this *Orthotrichum obtusifolium* I have 4 or 5 more I believe are non Descripts and I have sent them to Dr. Smith but have received no answer from him as yet, but I suppose from them and some other Cryptogama I have sent him, he will require some little time to determine some of them. I have also Discovered a new *Spergula* I call *maxima* and a new *Carex* that comes nearest *limosa* but wants the strong creeping roots that are so characteristic in *limosa*. Dr Smith declares it new to him also, and *Stellaria scapigera* of Wildenow, Dr. Smith informs me that neither he nor Wildenow knew its proper habitat, and *Potamogeton heterorophullum*, *Fl. sesilis* and another one I have not

been able to Determine as yet. I have found a number of Dickson's new mosses also. I was the first finder of *Convallaria verticillata*, *Carex pulla*, *Festuca calamaria* having found them in 1789 and 90 and *Eriophorum alpinum*, and *Juncus castaneus* and the *Spergula Sag[ina mariti]ma* and *Saxifraga rivularis*, but giving information or specimens they took the liberty to Declare themselves the Discoverers which was ungenerous in some Degree. If I remember *Thlaspi alpestre*, and *montana*, and *Hypochoris maculata*, and *Cypripedium calceolus* and *Serapas grandiflora*, and *ensifolia* are found not far Dystant from you which is plants I want much and as I lived in Yorkshire half a year at Broadsworth near Doncaster where were found the rare plants *Ophrys apifera*, and *insectifera*, and *spiralis*, and *Orchis ustulata*, and *pyramidalis*, all plants I want much, I shall be glad to hear from you soon and the catalogue as soon as convenient. If I am wrong in your address pray put me right—you seem to have forgot it.

I am, sir,

Yours humble servant,

(Sgd.) G. Don.

George Don to N. J. Winch.

Sir,—I have sent you a number of your Desiderata and I shall send you the rest or as many as I can furnish you with in the Autumn along with a collection of Cryptogamia. I would have sent you more cryptogamic specimens had I not been tyed Down to time for I am going a long Botanical excursion to the north in a part of the highlands that has not yet been Investigated by any scientific men so that I flatter myself with some new Discovery.—As you observe my neighbourhood is excellent for cryptogamia particularly musci and especially the Genus *Bryum* and a number of the *Salix* and by no means contemptible in ether *Carex* or any of the genera of cryptogames though it Does not abound with old Forrests as many parts of England do.

I will be obliged to you to save as many specimens and seeds and procure as many plants as possible you can by the Autumn or at least by the time I return and I shall writ you upon my return and I shall let you know what success I have met with in my excursions.

Believe me Dear sir your obedient and humble servt.

(Sgd.) G. Don.

Forfar June 29th 1802.

N.B.—The figuers is the number of plants I would wish of each sort thos with no figuer I only wish a good plant or 2 of a kind.

PLANTS.

Equisetum fluviatile +	Sium latifolium +
4 Orchis pyramidalis +	Enanthe pimpinelloides +
6 " ustulata +	Frankenia laevis
6 Ophrys muscifera +	Euphorbia paralis
4 " apifera +	Rosa tomentosa +
2 Serapas longifolia +	" villosa +
4 Cyripedium calceolus +	4 Dryas octopetala +
Schoenus compressus +	4 Cistus marifolius
4 Calomagrostis epigejos +	Thalictrum majus
Potamogeton marinus +	Statice limonium +
6 Primula farinosa +	4 Orobanche major
4 Hottonia palustris +	Trifolium hybridum
Ribes petraeum +	" ochroleucum
" spicatum	Carduus acaulis
Atriplex portulacoides	+ Carex capillaris
6 Gentiana verna +	" muricata

I will be obliged to you to send me specimens of those contained in this list and if to spare send 3 specimens of each sort. But those marked with a cross thus I have specimens of that will Do for my herbarium.

SEEDS.

Trifolium striatum +	Chenopodium olidum
" glomeratum +	" hybridum
" scabrum	Atriplex littoralis
" maritimum	" pedunculata
" ochroleucum	Beta maritima
Crepis biennis	Beta tenuissimum
Cichorium intybus +	Sison amomum
Carduus eriophorus +	Pastinaca sativa
" acaulis	Smyrnum olusatrum
Erigeron canadense	Pimpinella magna
Senecio tenuifolius +	Apium graveolens
" squalidus	Myosurus minimus
+ Centaurea calcitrapa	Frankenia laevis
Matricaria maritima	Rumex aureus
Zannichellia palustris	+ Saxifraga trydactylites
Panicum viride	Arenaria verna
" dactylon	Reseda lutea
Poa distans	Euphorbia paraliis
+ Rottbolia incurva	Papaver hybridum
Amaranthus blitum	Cistus marifolius
Potamogeton Densus	Statice limonium
Ruppia maritima	Lamium desctum
Hottonia palustris	Melissa calamintha
Anagallis tenella	Bartsia alpina
Samolus Valerandi	Antirrhinum minus

Antirrhinum spurium
+ ——— elatine
Lepadium didymum
Thlaspe alpestris
Sisymbrium terrestre

Erysimum cheiranthoides
Brassica minosis [monensis?]
oleracea
Lathyrus hirsuta
picris echiioides

SPECIMENTS WANTED.

Hypnum sciurioides +
If in fructification dendroides +
If in do. proliferum +
If in do. lutescens
If in do. sericeum
If in do. velutinum
 cylindricum
Fucus subfuscus
 varabilis [variabilis]
 plicatus
 lichenoides
 mamillosus
 loreus
 natans
 repens
Conferva spongiosa
 gelatinosa
 elongata
 pennata
 parasitica
Splachnum ovatum
 " ampullaceum
Polytrichum aloides
 " alpinum
Mnium heteromalum +
If in flower glaucum
 pellucens
If in flower arcuatum
Bryum paludosum
If in fruct. laterale +
 aestivum
Only if in fructification alpinum
 fontinellis
 antipyra-
 ticum
Lichen + albus
 + jolithus
 + atro-albus
 + calcareus
 + immersus
 + muscorum
 + confluens
 + canescens

Lichen + coeruleo-nigrescens
 + niger
 + Baecomyces
 + sphaerocephalus
 + calvus
 + vernalis
 + concentricus
 + punctatus
 + scruposus
 + atro-cinereus
 + Dicksoni
 + tricolor
 + cerinus
 + floridus
 + multifidus
 + cartilagineus
 + lanatus
 + torrefactus
 + Deustus
 + perlatus
 + granulatus
 + cristatus
 + sinuatus
 + fascicularis
 + simplex
 + crenulatus
 + crenularius
 + subimbricatus
 + carnosus
 + lacustris
 + frigidus
 + exanthematicus
 + quadricolor
 + rimosus
 + psora
 + gelidus
 + laevigatus
 + anincus
If in fruct. fragilis
 + papillaris
 + muscicola
 + exilis
 + saturninus

If in fruct. inclusus
 haematomma
 If in fructification send
 Jungermannia furcata
 pinguis
 asplenioides
 polyanthos
 asplenifolia
 platyphylla
 ciliaris
 Byssus aeruginosa
 aurea
 fulva
 barbata
 Merulus cornucopioides
 membranaceus
 Fistulina pectinata
 Boletus nummularius
 nigripes
 substrictus
 betulinus
 medulla panis
 suaveolens
 cryptorium
 labyrinthiformis
 rubeolarius
 sulphureus

Hydnum Barbajovis
 Auricularia nicotiana
 papyrina
 If any of the pezizas will make
 specimens you may add
 any of them.
 Nidularia campanulata
 laevis
 Clavaria phacorrhiza
 Lycoperdon epidendrum
 Sphaeria mori
 sanguinea
 mammosa
 fraxinea
 Or any other you find in your
 neighbourhood.
 You can add seeds of the
 following
 Phalaris phleoides
 Bromus madritensis
 Euphorbia tithymaloides
 Ranunculus muricatus
 " arvensis
 Vicea bengalensis
 Medicago prostrata
 Chrysanthemum Italicum
 Centaurea galactites

I wish as many of the Cryptogames specimens as possible you can particularly Fucii and any of the fungia that will make specimens and particularly the genus lichen and if possible all those marked with a cross thus + as I have specimens of several of the others though some of them not good ones and wish to see what Difference is in those in your part of the country by those produced in our more northerly situation.

George Don to N. J. Winch.

Sir,—Pardon me for being so long in writing you for owing to my removal which I no doubt you have heard off is in a great measure the cause of my long silence— I shall send you the habitats of the plants sent and continue sending you the rest of your dissiderata as soon as I can fall in with your letter which owing to me being but a short time removed I am at a loss where to lay my hand on a many articles as yet. I shall also send you specimens of my new discovered plants and Cryptogamae but it will be 2 week yet before I can yet begin to make them out as our hothouses is all to take threwhand [?] as non of the pots is turned as yet which ought to been done 6 weeks before—as it is but 2 week since I come to the

Edinburgh Botanic Garden—I will be obliged to you to send the specimens and plants and seeds as soon as convenient and send them by sea Directed to me at the Edinr. Botanic Gardens Leath Walk with a line of information—and any of the cryptogamia you can spare I should be glad to have 2 or 3 of each as I intend cultivating all them I can in the Garden particularly muscii a number of which I have planted already for from repeated tryals I have made myself wil not be difficult.

I am, Sir your humble servt.

(Sgd.) G. DON,

Botanic Gardens, Leath Walk.

Decr. 26th, 1802.

Mr. Nath. J. Winch.

¹[Answd. & Desiderata
sent 29th Decr. 1802.]

G. Don to N. J. Winch.

Sir,—I received your letter and after that some specimens which I return you my herty thanks — I would have answered yours in course but my youngest son was in a bad state of health for some time which ended in his dissolution that being the common tribute of nature—that so embarassed my feelings that I found myself very unfit for some time to pursue my favourite pursuit of Botany. — I herewith enclose you a specimen of *Alopecurus alpinus* which I found on wet rocks on a high mountain in Aberdeenshire called Loch.na.gare. I would be obliged to you to send me the names of the specimens I sent you before and I will send you the habitats of them for I have mislaid your letter where I had them marked and therefore have forgot what I sent you I should be much obliged to you for any other specimens of Lichins and as soon as our Class is over I shall send you some in return but at this time I am so throng that it is impossible for me to do anything in that at present.

I am sir your humble servt.

(Sgd.) G. DON.

Botanic Gardens L. Walk, Edinb.,

June 7th, 1803.

G. Don to N. J. Winch.

¹[Recd. in
Jany. 1804.]

Dear Sir,—I should begin all my letters with confession of sins but it will be better to amend my ways—I have been much engaged

¹ In Mr. Winch's writing.

in aranging my cryptogame specimens this winter as I have never got that done before which you may see is a very inconvenient thing to lay my hand on any thing I want however I have got throw a many of them and I will have your collection completed as soon as possible — I will be much oblidge to you for specimens of the *Hypnum crenulatum* and your *Lichin glaber* or *lævus* but I have mislayed your letter so cannot lay my hand upon it and any of your other *Cryptogamae* specimens that is to spare — the following is the habitats of the *Cardamine hastulata* the Mountain called Ben ibllech in the Isle of Skye, Isle of Rum else where I never observed it — *Stellaria scapigera* on mountain to the North of a Lake called Loch Errech in Badanoch and by the side of a Rivulet upon the side of a mountain by the side of a Lake called Loch nevis in the District of Knadert in Invernessshire but in both places truly rare — I will be oblidge to you to send me a specimen of all you Discovered in your last years excurtion as I cannot find your letter last sent and any of them I may have the carriage can be no object if you have them to spaire as on the other side is a list of plants and mosses and Lichens I want which is as follows. viz :—

A list of plants wanted for the Bot. Gardens viz.—

Zannichellia palustris
 + *Orchis pyramidalis*
 + *ustulata*
 + *Ophrys nidus-avis*
 cordata
 + *muscifera*
 + *apifera*
 + *Malaxis paludosa*
 + *Serapias longifolia*
 + *Cypripedium calceolus*
 + *Schoenus compressus*
 + *Panicum viride*
 + Specimens only, *dactylon*
 Amaranthus blitum
 + *Galium spurium*
 Ruppia maritima
 + *Hottonea palustris*
 Ribis petraeum
 spicatum
 + *Atriplex pedunculata*
 + *Beta maritima*
 + *Sison amomum*
 + *Smyrniolum olusatrum*
 Drosera longifolia
 + *Ornithogalum luteum*
 Carex pedata
 + *Euphorbia paralias*
 + *Rosa tomentosa*

Geum rivale
 2 and 3 var.
Thalictrum major
Bartsia alpina
 + *Antirrhinum spurium*
 + *Orobanche major*
 + *officinale*
 + *Thlaspi alpestris*
 + *Brassica muralis*
 + *Lathyrus hirsutus*
 + *Trifolium hybridum*
 + *glomeratum*
 + *scabrum*
 + *strictum*
 + *Picris echioides*
 + *Crepis biennis*
 + *Senecio tenuifolia*
 + *Matricaria maritima*
 + *Centaurea calcitrapa*
 + *Equisetum fluviatile*.

I wish specimens of the following
 if wild ones as I can easily
 get garden ones viz.—

Veronica montana
Panicum dactylon
Calamagrostis epigejos
Rotboelia incurvata
Primula farinosa

Campanula hybrida
Bupleurum tenuissimum
Caucalis daucoides
Sium latifolium
Statice limonium
Linum perenne
 + *Myosurus minimus*
 + *Narcissus biflora*
 + *Frankenia laevis*
 + *Rumex aurens*
 + *Saponaria officinae*
 + *Dianthus armeria*
 + *Rubus chamaemorus*
 + *Dryas octopetala*
 + *Papaver hybridum*
Cistus marifolia
Helleborus viridis
Melissa calamintha
Bartsia alpina
Antirrhinum spirium
 minus
 elatine
 orontium
Isatis tinctoria
Lepidium didymum

Brassica oleracea
Lathyrus hirsutus
 aphaca
Trifolium ochroleucum
 maritimum
 strictum
Hypericum montanum
Carduus acaulis
Erigeron canadensis
 And those marked thus + I
 wish specimens of if wild
 and some of them I wish to
 compare with others I have
 collected in Scotland and in
 the South of England.
 Plants and specimens
 (continued)—
 + *Phalaris paradoxa*
 + *Bromus madritensis*
 + *Euphorbia tithymaloides*
 + *Vicia berigalensis*
 + *Medicago pratensis*
 + *Chrysanthemum italicum*
 + *Centaurea galactites*.

The following is specimens of the cryptogama class which I wish much for in order to compare with some of mine and several of your lichens I have not specimens of.

Those marked thus + you need not send unless in fructification. I wish the Lichens much to compare with my own ones and where any of mine differs in the smallest degree from yours I shall send you a specimen of them in your collection.

Lichen albus
 Jolithos
 atro-albus
 calcareus
 immersus
 sanguinarius
 muscorum
 confluens
 canescens
 niger
 Oederi
 geographicus
 flavo-virescens
 sepincola [?]
 Baeomyces
 sphaerocarpus

Lichen calvus
 vernalis
 concentricus
 paralus
 punctatus
 scruposus
 atrocinerus
 Dicksoni
 pezizoides
 tricolor
 tartareus
 cerinus
 upsaliensis
 luridus
 multifidus
 radiatus

Lichen carnosus
 lanatus
 + glaucus
 + Islandicus
 + pulmonarius
 + furfuraceus
 + glomuliferus
 + caperatus
 + scrobiculatus
 torrefactus
 deusta
 polyrhizos
 proboscideus
 polyphyllus
 omphaleus
 perlatus
 orostheus
 resupinatus
 + tessellatus
 tremella
 granulatus
 nigrescens
 cristatus
 incurvatus
 fascicularis
 simplex
 crenulatus
 exanthematicus
 subimbricatus
 canescens
 lacustris
 hypnorum
 quadricolor
 rimosus
 psora
 gilidus
 leucopheus
 caeruleo-nigrescens
 carnosus
 rappilosus
 muscicola
 exilis
 saturninus
 inclusus
 acarii
 haematoma
 Splachnum ampullaceum
 ovatum
 Mnium heteromalum

Mnium + glaucum
 pallacens [?]
 + arcuatum
 + proliferum
 B + paludosum
 + tortuosum
 Fontinalis + antipyrretica
 + alpina
 Hypnum crenulatum
 sciuroides
 + crispum
 + viticulosum
 + crista-castrensis
 + dendroides
 + alopecuroides
 + proliferum
 + parietinum
 + palustre
 + cylindricum
 + riparium
 sericeum
 serpens
 velutinum
 Jungermannia + furcata
 + pinguis
 + asplenioides
 polyanthos
 platyphylla
 ciliaris
 Fucus natans
 repens
 esculentus
 sanguineus
 mammilosus
 lichenoides
 plicatus
 subfuscus
 variabilis
 Conferva spongiosa
 gelatinosa
 elongata
 pennata
 parasitica
 Byssus aruginosa
 fulva
 barbata
 Merulius cornucopioides
 membranaceus
 Agaricus ostreatus

Agaricus planus
 flabelliformis
 reniformis
 betulinus
 glavicans
 Fistulina pectinata
 Boletus all you can
 Hydnum barbajovis
 Auricularia nicotiana
 papyrina
 Piziza punctata
 coccinea
 epidendra
 inflexa
 navicula
 cochleato

Piziza polymorpha
 Nidularia campanulata
 laevis
 Clavaria phacorhiza
 spathula
 ophioglossoides
 Lycoperdon stellatum
 innatum
 epidendron
 Sphaeria sanguinea
 mori
 mammosa
 fraxinea
 and any others you have to
 spare.

Sir,—You wished to know what is become of the late Mr. Mackay's Herbarium it is in the hand of his brother but I am certain he does not mean to part with it I believe it consists mostly in Foreign plants and what plants he collected the two excursions he had throw the highlands but I am certain it does not abound in neither lichens nor mosses as he had but little knowledge of that part of botany for in the year 1791 when I first became acquainted with him he knew very little of native or foreign plants so that the time he had to study would not admit of his having a thorow knowledge of every part of Botany althow he might be allowed to have been a very assiduous young man—but I expect to see throw it soon an then I shall give you an impartial account—when you have any specimens of mosses or lichens of such as are plentifully about Newcastle I would be obliged to you for a few of each as I have several applications for some from some of my correspondents which I find I will be unable to supply them with and as I am getting in return such as do not grow plentifully in our Neighbourhood it may be in my pour to send you a part of any I have in return—you wish to know if I have made any new discoverys in my last excursion the snow was on the high mountains by the time I got 40 miles from Edinbr. so that I was not so fortunate as I could a wished however I find I have the Dicranium varians of Swartz quite new to Britain and also I found the Erigeron alpinum near Perth and also the Linnaea Borealis quite in the lowlands a place one would have little thought of finding them I have also a new Hypnum which I found in 1802 which Dr Smith writes me he has named after me it is somewhat like denticulatum but at same time very Different.

I am yours truly,

(Sgd.) G. DON.¹

¹ Another untidy letter; the thread is broken and resumed all over the pages. Much of the mis-spelling is lost in transcription, because the writing at times is so hard to read that the letters cannot be distinguished.—B. D. J.

P.S. Could you inform me the price of Dicksons Fascicles of Dried plants the price of each.

G. Don to N. J. Winch.

Sir,—I enclose you a specimen of the *Encalypta alpina* which I discovered on rocks on the very summit of Ben Lawers in Oct^r. 1804 I have never found it anywhere else and but sparingly there. I send you this in order to show you I have not forgot you altogether your last letter I have unfortunately mislaid but you can write me your desiderata and where that genus is extensive in specis write me your wants of one famaly at a time and I shall be lickly to send you them not long after I recieve your order and where the genes is not extensive such as *Splachnum*, *Sphagnum* &c. you can send 3 or 4 at once—I will be much oblidged to you for specimens of the *Hypnum crenulatum*—*fluitans*—*alpinum*, *palustre*—*cylindricum*—*riparium*—*dendroides* if in fructification.

Splachnum ovatum & *ampullaceum*. *Neckera viticulosum* if in fruct. *Dicranum interruptum*—*sciuroides*. *Grimmia pusilla* or any thing else you may judge rare where you can preserve specimens. I should like specimens for my Herbarium and where you cannot procure so many I beg you will send me what you can with mislaying your last letter I cannot remember what you can furnish me with. I wish much for a plant and specimen of the *Scheuchzeria palustris* and a plantago you have found. I some time ago sent you my *Desiderata* of Lichens any of which I will thank you for. I have found near Edinr. lately the *Phascum stoloniferum* or *serratum* but which I cannot determine I think them both one. I am going a short botanical excurtion but will be home soon.

N.B. I have found the *Valeriana pyrenaica* in two other habitats within this last year I have in consequence given it in my 4 *Fasciculæ*.

I am Sir your most obedt.

(Sgd.) G. Don.

I wish much for a few of each kind of the Mosses.

Royal Botanic Garden, Edinr.

Oct^r. 15. 1805.

Royal Botanic Garden,

Edin^r.

Dec^r., 3, 1805.

Sir,—In looking over my specimens I have found out your *Disiderata* last sent about 4 days ago and have lost no time in forwarding what nature specimens I have in my possession of your *Disiderata* which is as follows—viz.

Veronica fruticulosa
 Campanula rapunculoides
 Orhys corallorhiza
 Hieracium alpinum
 Rosa involuta
 Brassica campestris
 Grimmia nuda
 Donniana

Grimmia Schistii
 Symphytum tuberosum
 Linnaea borealis
 Erigeron alpinum of Dicks.
 Polypodium dentatum
 Ajuga alpina
 Hypnum Donnianum

I have a prospect of getting specimens of the Ajuga pyramidalis for my Fasciculus next summer and I am not sure but I may have a specimen of Gentiana nivalis but I have never found the Arbutus alpina in flower nor have I ever seen the Cardamine bellidifolia in Scotland. I hope also to be able to procure you the Pyrola uniflora to my Desiderata I hope you will add Byrum nigrescens and Bartramia crispa Shoenus monoecius and Grimmia pusilla, as your not satisfied with the last being distinct from G. calcareum where it is possible to send me specimens for my Herbarium I beg you will have it in view and where enough cannot be obtained I beg you will let me have as many as you can which will always be a step to that object I will be glade to hear from you soon and believe me dear sir yours

most obedt and humble servt.

(Sgd.) G. Don.

P.S. I have sent them per Newcastle Waggon any other specimens you may want for your Herbarium you will have the goodness to write me. I subjoin a list of what new plants are published in my Herb. which I can let you have specimens of—viz:—

Valeriana pyrenaica
 Juncus supinus
 Myagrum paniculatum

Gallium spurium
 Lichen ——— [illegible
 and blotted].

G. Don to N. J. Winch.

Forfar, December 6th, 1807.

Sir,—Some time ago I Recieved your two volumes of the Botanists guide for which I return you my most gratefull thanks they contain a number of rare plants and especially the Class Cryptogamia the the [sic] method you have adopted in the Lichens I have reason to believe will become general your work is a just specimens of your zeal and ardent pursuit of Botany—since my return to Forfar I have made several excursions and found a good many new plants and I am anxious in every opportunity of rendering my collection as numerous as formerly in consequence of which I have sent you my disederata taken from the Botanists guide. Plants or seeds of as many as you can will much oblidge me—your disederata

I am paying particular attention to but it contains several plants doubtfull natives which have not been found for many years I shall send you all that I have native plants of. I have cultivated specimens of nearly all the remainder.

++ Schoenus monoicus	+ Scheuchzeria palustris
++ Scirpus multicaulis	++ Cerastium pumilum
Panicum sanguinale	++ Reseda lutea
Agrostis spica venti	+ Euphorbia paralia
+ Poa procumbens	Rosa tomentosa
Cynosurus echinatus	nova sp.
Bromus multiflorus	Rubus crylifolius
secalinus	Potentilla aurea
arvensis	+ Cistus marifolius
Arund. epigejos	Thalictrum majus
++ Hordeum maritimum	Thymus calamintha
Triticum loliaceum	Bartsia alpina seeds.
Ruppia maritima	Antirrhinum spurium
Sagina erecta	++ Orobanches all species.
+ Anchusa officinalis	Lepidium ruderales
++ Primula farinosa fl. albo or	+ Thlaspi alpestre
any other variety	+ Cochlearia anglica
Hottonia palustris	Sisymbrium sylvestre
Anagallis arvensis	+ + irio
+ Verbasum nigrum	Brassica oleracea
Chironia littoralis	Lathyrus hirsutus
pulchella	Ervum tetraspermum
centaurium fl. albo	+ Trifolium maritimum
No. 221 B. G.	subterraneum
Ribes spicatum	scabrum
petraeum	+ + glomeratum
Chenopodium urbicum	striatum
glaucum	Picris echioides
+ + Gentiana verna	+ + hieracioides
Several plants of this if convenient.	+ + Hedypnois hirtus
+ + Bupleurum tenuissimum	+ + Crepis foetida
Daucus maritimus	+ + biennis
Sium nodiflorum	Senecio tenuifolius
Sison amomum	+ + Anthemis maritima
+ + Statice limonium	+ + Centaurea calcitrapa
+ + Drosera anglica	+ + Orchis pyramidalis
+ + longifolia	+ + ustulata
+ + Juncus acutus	+ + Ophrys muscifera
+ + maritimus	+ + apifera
Rumex acutus	+ + Malaxis paludosa
maritimus	+ + Cypripedium calceolus
palustris	Carex divulsa
+ + Pyrola media	+ + extensa
+ + Scleranthus perennis	acuta
	+ + Sagittaria sagittifolia

<i>Salix forbyana</i>	+ <i>Hypericum maculatum</i>
<i>rubra</i>	+ + <i>Tamus communis</i>
<i>croweana</i>	<i>Juncus</i> No. 221.
<i>mas et fem.</i>	<i>Delphinium consolida</i>
<i>russelliana</i>	<i>Alopecurus bulbosus</i>
<i>bicolor</i>	<i>Bromus spiculitenuata</i>
<i>fusca</i>	<i>Cuscuta epithymum</i>
<i>rosmarinifolia</i>	<i>Limosella aquatica</i>
<i>aquatica</i>	<i>Sisymbrium amphibium</i>
<i>oloefolia</i>	+ <i>Brassica orientalis</i>
<i>mollisima</i>	+ <i>Erodium maritimum</i>
<i>decipiens</i>	<i>Artemisia gallica</i>
+ + <i>Peucedanum silaus</i>	<i>maritima</i>
+ + <i>Atriplex portulacoides</i>	<i>Atriplex pedunculata</i>
<i>Equisetum fluviatile</i>	<i>Salix radicans</i>
<i>Aspidium lobatum</i>	<i>Chlora perfoliata</i>
<i>Primula elatior</i>	

Those that are marked with one cross I have plants of. I only want a few native specimens of each. Those marked with two crosses I wish a few plants of each particularly those that grow in your vicinity.

I am convinced you can only send me a small quantity at present I want as many as you can conveniently procure in the Spring and those that are annual I will thank you to collect when the season arrives some of the annuals however will remove very well in spring such for instance as the *Centaurea calcitrapa* it will be requisite to cut off the leaves when they are picked and pack them among *Sphagnum*s they can be sent by a ship to Dundee—Directed to me at the Botanic Garden, Forfar.

Could you inform me how to direct to a Mr. Wilkinson a Botanist in or near Sunderland.

N.B. At some future period I shall be under the necessity of troubling you for some specimens of *Cryptogamia* but I am convinced the demand at present is sufficient.

Where plants cannot be procured of the *Salix* and *Ribes* Cuttings will do very well in so doing you will greatly oblige.

Your Humble Servant.

(Sgd.) G. DON.

P.S. I wish specimens of them as well as plants I have a specimen but I should wish for 2 or 3 specimens in order to complete some collectors of specimens

Yours as above

(Sgd) G. DON.

G. Don to N. J. Winch.

Forfar, Feb. 18, 1810.

Sir,—I received your letter in due time and I shall lose no time in sending you part of your Disiderata with several valuable and interesting additions they will leave Dundee by the first ship for Newcastle after the 24 instant—I am much obliged to you for your kindness in saving specimens for my Herbarium as I am now employed in finishing my 7 and 8 numbers after a stand of nearly 4 years for if I had not got Subscribers to enable me to have carried it on I could a predicted my Discoverys would a have been very limited in future but although my subscribers are not numerous yet I flatter myself they are respectable and likely to continue—and on my part shall exert every endeavour to make them interesting—if I remember right I have sent you the new plants which I have given in my 7 and 8 numbers which are *Campanula persicifolia*, *Sagina maritima*, nova species, *Potentilla opaca* of Linn *Rotboella filiformis*—I am to send you a package for Mr. Harriman which I beg you will take the trouble of forwarding along with yours if you would have the goodness to send the specimens you have collected for me and I will get some of them to help my 9 and 10 numbers—I formerly sent you a long list of Desiderata particularly of plants of my Garden I beg you will add *Rosa collina* and your *scaberosa*. I flatter myself I have the latter but wish to see your plant as also *Rosa tomentosa* and *villosa* and *Ribes spicatum* I have found the *Ribes petraeum* or *spicatum* in great plenty in my neighbourhood—I am very anxious to encress my collection of Growing plants as I have several Classes arranged and of consequence a number of blanks which I am making applications to all quarters to get filled up. I wish much for seeds of *Bartsia alpina* and I should like to have a few plants of *Gentiana verna* and and if possible *Cypripedium calceolus*, *Tamus communis* and if you can observe one variety among them would like them also and if you can send me *Primula farinosa*, *Schoenus monoicus* with white flowers which I understand is not uncommon—[illegible] and—[illegible] and *Rubus caesius* but I do not want *Rubus corylifolius* as I have got it—Have you ever seen *Arenaria verna* with double flowers if you have got it pray send me it. I observed it among specimens collected in Derbyshire about 14 years ago. Is it possible to send me *Anthemis maritima* I have never seen it. I likeways wish much for *Juncus acutus* and *maritimus* and your new species and *Crepis foetida* and *Hyderserus hirta* can you send me plants or seeds of any of those you collected in Surry, did you not fall in with the following mosses *Trichostomum flexifolium*, *Tortula imberbis*, *Grimmia starkeana*—*lanceolata*, *Dicranum bipartitum*—*cylindricum*, *Trichostomum obtusum*, *Tortula barbata*,—*aristata*, *Hypnum medium*—*inundatum*—*tenellum* as they inhabit the south. I want specimens of all those even for my own private [?] herbarium. I must leave you to collect such specimens as you can with con-

venience get of those which will best answer you are a perfect judge for instance *Cistus marifolius*, *Schoenus monoicus* and *Pyrola medea* as I have specimens of all the other British species and would give the whole in a grop together. I would like also a few specimens of *Carex extensa* as also plants and plants of *Carex acuta* both *Orobanches* plants and specimens and a few specimens of *Carex digitata*. I have already a few of both *C. digitata* and *extensa*. I would likeways be much oblided to you for specimens of all the *Opegraphas* as I have got a few specimens of the *Opegrapha Lyelli* I beieve as many as will answer saved by C. Lyell Esq., New Forrest I would give as many of them together as possible. I am quite bewildered among them since they were made a separate famely having neither Books nor specimens to study them by. I shall add a list of all the mosses which I want specimens of for my Herbarium and where you cannot send me enough send me what you can in order to compair with some I have which I am not certain of and there is some of them I der say I have non of—they are as follows viz.—

MY DESIDERATA.

Tetraphis pellucida	+ barbata
Grimmia Dicksoni	aristata
+ hommamala	brevifolia
verticillata	Orthotrichum affine
Dicranum undulatum	pumelum
+ interruptum	rivulare
fulvellum	+ nudum
rigidulum	+ pulchellum
+ ovale	Neckera heteromalla
pulvinatum var B.	Hypnum + polyanthos
squarrosus	mysuroides
taxifolium	+ crenulatum
flexuosum	+ serrulatum
+ cerviculatum	Teesdalii
polyphyllum	+ riparium
Trichostomum + lineare	praelongum B
fontinaloides	+ stokesii
+ trifarium	+ stramineum
Tortula rigida	+ confertum
cunifolia	murale

I have some specimens of most of the Hypnums but not sufficient to answer my purpose those marked thus + I want much even altho you cannot procure specimens enough for my purpose.

Hypnum velutinum	Hypnum Schreberi if in fruit
intricatum	and
tenellum	fluitans
implexum	rugosum
illecebrum	+ aduncum

Hypnum +palustre
 fluviatile
 filicinum
 commutatum
 +abbreviatum
 +chrysophyllum
 scorpioides
 +nigro-viride
 +alpinum
 +recognitum
 +attenuatum
 +polymorphum
 Fontinalis capillata
 squamosa
 Bartramia crispa
 ithyphylla
 arcuata
 I have plenty spec. of
 B. Halleriana
 Mnium +androgynum
 Bryum nutans
 trichodes
 +carneum
 +capillare
 +annotinum
 +nigricans
 ventricosum
 roseum
 lanceolatum
 cuspidatum
 +aristatum
 Polettrichum juniperinum
 +aloides
 nanum
 +pumilum
 Sphagnum squarrosum
 Gymnostomum No. 109
 microstomum
 Phascum cervicollum
 patens
 Phascum bryoides
 muticum
 Schreberianum
 crispum
 Jungermannia scalaris

Jungermannia quinquedentata
 bidentata
 nemorosa
 If in flower bicuspidata
 reptans
 If in flower platyphylla
 curvifolia
 If in flower tomentella
 divaricata
 minutissima
 All the Leprarias, but botryoides
 and alba.
 All the Pulveraria both species
 of Variolaria.
 Lecidea, all but the following
 viz :—
 parasema
 petraea
 atrovirens
 silaceus
 cupularis
 luteola
 incana
 icmadophylla
 hamatomma
 var B.
 vernalis
 aurantiaca
 calva
 crenulata
 orosthea
 atrorufa
 lurida
 vesicularis

These are what I do not want.

Send
 Caliceum claviculare
 Gyrophora cylindrica
 erosa
 Send me all your
 Variolaria
 Send me
 Endocarpum hedwigia
 smaragdulum
 Weberi

MY DESIDERATA continued.

Thelotrema pertusum
 lepadinum
 hymeneum

Isidium Westringii
 phymatodes
 Urciolaria cinerea

Urciolaria calcarea
 fimbriata
 exanthematica
 bryophila
 epulotica
 cyrtaspis

Parmelia excisa
 pinicola
 sophodes
 ostracadermis
 coarctata
 amylacea
 impollita
 glaucoma
 diacaspis
 Turneri
 dispersa
 frustulosa
 cerina
 stillicidiorum
 chloroleucum
 vitellina
 varia
 squamulosa
 crassa
 lepidota
 spongiosa
 brunnea
 epigaea
 saxicola
 elegans
 miniata
 murorum
 leptalea
 virella
 recurva
 aipolia
 affinis
 scortea
 saturnina
 lacera
 tuniformis
 flaccida
 furva
 cristata
 Scotina
 and var. sinuata
 melaina
 muscicola

Parmelia scopulorum
 siliquosa
 pollinaria
 polymorpha

Sticta limbata

Peltidia rufescens
 polydactyla
 horizontalis

Citraria juniperina

Citraria var. prunastri

Cornicularia muricata
 opuntia
 viridis
 lanata
 aculeata

Usnea florida

Baeomyces placophyllus
 caspititius [caes]
 digitatus
 cornucopioides
 diformis
 bellidiflorus
 cervicornis
 fimbriatus
 cenoteus
 alccicornis
 spinosus

Any of the Tremella that will
 preserve

Fucus ruscifolius
 hypoglossum
 membranifolius
 natans
 tamarascifolius
 bifidus
 edulis
 phyllitis
 ciliatus
 laceratus
 laciniatus
 confervoides
 lycopodioides
 purpurascens

Ulva asparagoides
 clavellus
 articulatus
 opuntia
 viridis
 limosa

Ulva laciniata
lanceolata
lactina
defracta
elminthoides
intestinalis
fistulosa
plumosa
Conferva rivularis
nitida
fontinalis
confervicola

Conferva limosa
decorticans
lucens
sordida
setacea
amphibia
littoralis
aeruginosa
corniculata
scoparia
flexuosa

I would need specimens of all your *Conferva* as I am not well acquainted with that family.

As also all your
Byssus
 And all your
Boletus that will save for
 specimens
 As also all your
Fistulinas
Hydnum auriscalpium
barbajovis
 All your *Helvellas* that
 you can save

As also *Peziza* and
Auricularia and *Clavaria*
 And *Sphaeria* and *Reticularia*
Trichia and the genus *Mucus*
 [*Mucor*?]
Xylostroma gigantea
 — *cordis*
 All your *Rhizomorpha*
 and [illegible]
Variolaria faginea

You will see by this list that I am greatly at a loss with the lichens for although I know the most of Witherings yet from the Great improvements and additions and alterations I am in a manner bewildered among them having neither specimens nor books to assist me. I have little doubt I have a many of those I am asking from you but I would be obliged to you for 3 or 4 specimens of each sort as many of them as you can and specimens for Herb. Brit. of such as will answer I mean the rarer species you can conveniently and if you could send me them as soon as you can a [seal here] making some excursions early in the summer and that wa [seal here] . . . e to collect not only them but new ones.

and if possible plants of *Pyrola medea* I have in cultivation all the other british species. I have seeds of *Galium tricornis* and *spurius*, seeds of *Chironia pulchella* and *littoralis* and *Centaurea fl. albo*, *Hottonia palustris*, *Chenopodium glaucus*, *Atriplex pedunculata*, *Saxifraga tridactyla* and *Elymus europaeus*, *Reseda lutea*, Plants of *Orchis ustulata*, *pyramidalis*, *Malaxis paludosa* and specimens as also *apifera* and *muscifera* and specimens.

If you could send any of my *Desiderata* of growing plants this spring I mean such as one in your neighbourhood although it were

only one would be a great acquisition to my collection—I have discovered several new mosses and shall send you some in course.

I am Dear Sir your humble
Servt.

(Sd) G. Don.

G. Don to N. J. Winch.

Botanic Garden, Forfar,

Apr. 19, 1812.

Dear Sir,—I received a letter a few days ago by post from you and to Day your Traveller left me another but he was so short time in the place that it was impossible for me to send any thing with him owing to the confused state of my herbarium, but I have a complete Herbarium of all the British plants to make up for a gentleman and the Books is nearly ready to begin to—I expect them from the stationer in 2 or 3 daytime so that I will have occasion to find all my Discoverys and other rare plants—other ways it would have taken me 3 weeks to have found out the few contained in your Desiderata—I do not mean to charge you money but you will have the goodness to send me the specimens you mentioned you had collected when in the south of England and I gave you a long Disiderata of Living plants some time ago which I will thank you to send me what you can of my Disiderata among which I beg you will send me the *Juncus maritimus* and *acutus* and a new Discovery as also *Gentiana verna*—*Cypripedium Calceolus Schoenus monoicus*—and I have all *Anthemis maritima* and *Ribes spicata* and *Rosa collina*—*Atriplex portulacoides* *Serapias grandiflora* and *palustris pyrola media*—*Anchusa officinalis picris heracioides* *Carex depauperata*—*acuta* *Schoenus compressus mariscus nigricans* *Scirpus multicaulis* *Panicum sanguinale* seeds *Dactylon Cynosurus echinatus* seeds and specimens *Hordeum maritimum* seeds and specimens *Galium tricornis* seeds and specimens *Sagina erecta* seeds and specimens *Primula farinosa flore albo* *Hottonia palustris* *Chironia pulchella* seeds *Samolus Valerandi* *Chenopodium glaucum* seeds and specimens *Bupleurum tenuissimum* *Peucedanum silaus* *Sium nodiflorum* *Statice limonium* *Drosera anglica*—*longifolia* *Reseda lutea* *Euphorbia paralias* *Rosa tomentosa* *Thymus calamintha* *Bartsia alpina* seeds *Antirrhinum spurium* seeds and specimens *Orobanches* all both plants and specimens *Thlaspi alpestre* *Cochlearia anglica* *Sysimbrium Irio* *Lathyrus hirsutus* seeds *Eryum tetraspermum* seeds *Picris echioides* *Crepis foetida*—*biennis* *Orchis ustulata* and specimens—*pyramidalis* and sp. *Ophrys apifera* and *muscifera* *Sagittaria sagittifolia* *Tamus communis* *Atriplex pedunculata* *Aspidium lobatum* *Alopecurus bulbosus* *Cuscuta epithymum* *Sysimbrium amphibium* *Artemisia gallica* specimens of the following mosses *Bryum nigricans* *Orthotrichum pulchellum* *Dicranum interruptum* *corniculatum* *Tetraphis pellucida* *Grimmia Dicksoni*—*hommomalea* *Trichostomum fasciculare* *Tortula falax*—*cuneifolia*—*barbata*—*aristata* *Hypnum poly-*

anthos nigro-viride—crenulatum—serrulatum—Teesdalii—riparium—Stokesii—stramineum—confertum—tenellum—intricatum—illecebrum—alpinum—abbreviatum—chrysophyllum Mniun androgynum Bryum an [. . . seal here . . .]—ventricosum—Polytrichum juniperinum [. . . seal here . . .] aristatum—all your rare Phascum Bry[um,] Hypnum polymorphum, Parmelia d [. . . seal here . . .] lepidota—elegans—leptalea—furva—tereformis—spongiosa—stillicidiorum—chloroleucus—frustulosa—lacera—sageni [?] amylacea—sophodes—prunosa—urceolaria—cyrtaspis—bryophylla?—epulotica—exthanthematica Verrucaria alboatra [?]-acrotella—spongiosa—nitida—geminata—thelostoma, Lecidia carnosa—luteo-alba—rupestris—calva—Jangermannia quadricolor—hypnophila—atroalba—athrocarpa—miscellus some of your Oreographas Baeomyces caespitium and as many of your Sphaerias and Conferva and Clavaria as you can my Desiderata is taken from your Botanists guide and any of them that you can conveniently fall in with in plenty send me a good many specimens I have done nothing in my herbarium for some time past but means to commence directly and have I 3 reams of paper in the stationers for that purpose.

I am yours truly,

(Sd.) G. DON.

I will thank you to send me what of the growing plants of my disiderata you can as the season is now arrived. G. D.

The following letter to Mr. Sowerby is now in the British Museum, Cromwell Road, and is reproduced here by permission of the Keeper of the Botanical Department. It shows that Don appreciated the importance for botanical purposes of the difference between cultivated and native specimens, and that he endeavoured when contributing to the "English Flora" to prevent misapprehension on the part of its authors as to the source of the specimens he sent to them:—

George Don to Mr. Sowerby.

Forfar May 22, 1799.

Mr. Sowerby

Sir,—I have sent you a few plants as I understood that the specimens that is Dried will not Answer Drawing. I shall send up Every 2 weeks through the summer if they will answer you a few as they Come into flower as I sent you up at a former piodred native specimens. You will find that owing to my soil and situation that they Differ very little from the native ones. Yours

GEORGE DON.

N.B. When I have not sent before native specimens I shall send in course alonge with the green specimens native ones at the same time. G. Don.

[Address on the cover] Mr. Sowerby, No. 2 Mead Place, Lambeth, London.

POSTSCRIPT.

The foregoing sheets had gone to press when Miss M'Nab, with whom I was in communication regarding incidents in the life of her grandfather, William M'Nab, and of her father, James M'Nab, both former chiefs of the Garden staff, brought to my notice some correspondence that had been in the possession of her father between Dr. Neill and George Don, the son of the Forfar Botanist. The letters, with which is preserved the manuscript of Dr. Neill's biographical notice of George Don (No. 19 of the bibliographical list on page 91 of these "Notes"), show us Dr. Neill at the work of preparing this notice, and add to the information conveyed in Mr. Druce's Memoir. By the kind permission of Miss M'Nab I am enabled to reproduce them here:—

Dr. Neill to George Don (son of the Forfar Botanist).¹

Geo. Don, Esq., 44 Bedford Place, Kensington.

Edin^r, 1st Feb. 1848.

Dear George,—I long to hear it goes well with you and your brothers since I parted with you in the end of August, already nearly half a year ago. I had a letter and some seeds from Patrick since he went to Tooting nurseries, and wrote an apology for not calling for him. I hope you are trying to find a good situation for him. Are James and Charles still in the same situations?

Mr. Gardiner's *Flora of Forfarshire* came to me the other day; and I am mortified to find the author so much in the dark respecting your Father's history. For example: he says, Mr. Don served an apprenticeship to a *watchmaker* in *Forfar*; whereas it was a clock-maker in Dunblane. He tells us that at Glasgow he became assistant to the Professor of Botany there;—but he never did so; it was your brother David who became assistant at the lectures in Glasgow. He alleges that from Glasgow Mr. Don went to Edinburgh, where Messrs. Dickson introduced him to Sir J. E. Smith &c.; whereas, he went to Forfar from Glasgow, and took a long lease from Gray of Carse of Dovecot-hill, and it was Mr. John

¹ The manuscript of this, in Dr. Neill's writing, is a draft of the letter and unsigned.

Mackay (not Dickson & Co.) who made him known to Sir J. E. Smith. Brodie of Brodie recommended Mr. Don to Dr. Rutherford, and he then sub-let Dovecot-hill, and removed to the Botanic Garden at Edin'. Here he spent 4 or 5 years, latterly studying medicine and surgery; and then returned to Forfar, practised as a country doctor, renovated his botanical collection of living plants—and visited Clova Mountains, adding several new plants to his former discoveries, and here he died.

Could you assist my memory as to some dates and places? For instance. 1. Where was Mr. Don born and what was your grandfather? 2. Can you fix in what year it was that I first visited the garden at Forfar?—there were only three children then, yourself, David, and a little sickly sister.¹ 3. Do you recollect in what year the family came to Edinburgh?² you were a stout chap—David a little boy, and also James. Patrick and Charles were born in Leith Walk. 4. Do you recollect in what year Mr. Don died and in what month Mr. Brown and I visited Dovehill? 5. Could you point out the spot in Forfar Churchyard where your father was buried? My opinion is that British botanists ought to mark the spot by a simple but massy and enduring monument, and I may add that to my knowledge several are anxious to have an opportunity of testifying their admiration of his zeal and success as a practical botanist, and their deep regret for aspersion cast on his memory, regarding the reality of his discovery of *Lychnis alpina*, *Sonchus cœruleus*, &c. now so thoroughly wiped away. Where, it might have been asked, could Mr. Don obtain the seed of *Lychnis alpina*? It has never been known to produce seed in cultivation. 6. Can you mention other plants, the reality of which was sneered at by some English botanists? and can you state what are the plants mentioned by your Father, and not yet re-discovered by searching botanists: I recalled *Potentilla tridentata* and *Hierochloe borealis*.

Hierochloe borealis is called by Sir W^m. Jac. Hooker a "valuable discovery by the late acute Mr. G. Don"; but is now denied. *Potentilla tridentata* is in the same predicament: but will yet be re-discovered.

Be so good as write me fully on all these points.

Mr. George Don (son of the Forfar Botanist) to Dr. Neill.

44 Bedford Place, Kensington,
Feb'y. 28 1848.

My dear Sir,—I intended to have written to you long before this, but something always came in the way to prevent it. James and Charles are still in their old situations, the latter got married in Sept^r or Oct^r last, but I have not yet seen his wife. As to

¹ See pages 62, 63 of the Memoir in these "Notes."—*I. B. B.*

² See page 63, footnote 2, of the Memoir in these "Notes."—*I. B. B.*

Patrick I have no influence with any party who can assist him to a situation, as I am perfectly unknown in the Horticultural world. James and Charles have more influence with nurserymen, both dealing with Mr. Knight in the King's-road for seeds, &c., and even Patrick is much better known among gardeners and nurserymen than either of us, having attended most of the flower-shows, and been very successful in gaining prizes, but the fact is a good situation is difficult of attainment unless the influence be considerable. I hope, however, that he will soon succeed, for very few gardeners have been more successful in the cultivation of plants, besides being a very careful and steady man. Fortune has not used him well.

With regard to my father's history I know but little, but what I do know either personally or from others I will endeavour to give in as consecutive a form as possible. I will therefore begin with my great-grandfather, who was a farmer in Mearns or Kincardineshire and who had two sons and one daughter, the eldest of whom Thomas one of whose sons resides in Lower James Street Golden Square London; the second Alexander my Grandfather who was himself a great cultivator of flowers for amusement, and followed the trade of a *Currier* first in Dundee and latterly in Forfar, but ultimately became a manufacturer of *Brogues* which he disposed of in the Highlands; and thirdly Helen the daughter who was married to a Mr. Miller two of whose sons became gardeners one of which was Mr. Miller gardener at Duplin Castle Perthshire and the other Mr. Miller of Belmont Castle Forfarshire. My Grandfather Alexander married Jane Fairweather the daughter of a farmer in Mearns by whom he had two sons and several daughters, the eldest George my father, so named after his uncle George Fairweather a *Bayordie* a farm so called in Kincardineshire, the next William my Uncle who became a Clock and Watchmaker in Forfar, many watches bearing his name as maker are still to be found in Forfar and its neighbourhood, but he ultimately emigrated to the United States. My father who must have been born in Dundee¹ and was probably first apprenticed to a Clock and Watchmaker there or he may have gone to Dumblane where I know he did work but whether as an apprentice or journeyman I have no means at present of ascertaining. He went to London I have been led to understand by land following his trade in various towns on the road, until he ultimately reached London where he procured work in a shop I believe in Fleet Street, where his expenditure being much greater than his earnings, my Grandfather had to remit him the means of enabling him to return to Forfar where he had then removed. My father about this time appears to have got tired of the Clockmaking business and went to learn Gardening or Horticulture with his cousin Mr. Miller then gardener at Duplin Castle, and here he appears to have made his first botanical excursions and to have formed the acquaintance of the Brown's of Perth, as also with my mother Carolina Clementina Oliphant Stuart who was then employed in Gask House the seat of Mr.

¹ See page 55 of the Memoir in these "Notes."—J. B. R.

Oliphant. Shortly after his marriage he removed to Glasgow and followed his original profession of Clock and Watchmaker, and where he made the acquaintance of Bailie Austin, and Dr. Stuart of Luss &c. still however continuing his botanical excursions, this must have been about the year 1793, where his two first children were born both daughters who died in their infancy. He afterwards returned to Forfar I suppose about 1795 or 1796 where my sister you have seen was the first born, afterwards a son George who died in his infancy, the next myself, then David, and then James Brodie all of whom were living when he went to Edinburgh in 1803 or 1804, but the last James Brodie died from teething soon after our arrival in Leith Walk. In Forfar my father, previous to his taking the lease of the Doo-hillock, rented a piece of ground in the neighbourhood where he cultivated plants, following at the same time his profession of Clockmaker. He then got a long lease 99 years of the Doo-hillock from Gray of Carse at a rent of 5 shillings per annum, where he built two houses to which he must have removed as soon as one of them was habitable. This ground the lease of which has still between 50 and 60 years to run has now become very valuable having been converted into a rail-road station. I consider I have been unfairly robbed by my fathers so called friends in Forfar principally lawyers¹ all of whom, however, are now dead. In the year 1803 or 1804 my father went to Edinburgh, through the recommendation of James Brodie of Brodie, leaving the ground at Forfar in charge of my Grandfather, where Patrick was the first born, then James Edward now Gardener at Knole Park near Sevenoaks, Kent. During my fathers residence in Edinburgh, he attended nearly all the medical classes, with the view ultimately of following that profession, the tickets or cards for these lectures with the names of the professors he attended are now in the possession of Patrick since David's death, and which cards you can have by writing to him should you consider them of any use.² In Forfar after our return from Edinburgh in 1807 or

¹ See page 60, footnote.—*J. B. B.*

² See page 66 and footnotes 2, 3 of the Memoir in these "Notes." The definite statement in this sentence throws a sidelight upon Don's career in Edinburgh which, flickering in Dr. Neill's remarks quoted at the page cited, I abstained from pointing out when his relations with Professor Rutherford were referred to. It is obvious that Don's ultimate aim to become a medical practitioner and the attendance upon classes and the work requisite for its attainment would scarcely be compatible with that whole-hearted devotion to the Botanic Garden essential in its Principal Gardener. In this of itself there would be an element which might bring about that "want of cordiality" between Don and Professor Rutherford to which Dr. Neill refers, and which may have been the foundation for Mr. Booth's phrases in his letter to Sir J. E. Smith. Allowing this, one may yet admire Don's efforts to secure a position in which he would be independent and able to prosecute his favourite study uncurbed by routine, and if we regret that for his own material success this did not happen we may also reflect that he must have experienced much real happiness amongst the plants in their native homes, and in this would find some recompense for the frowns of fortune.—*J. B. B.*

1808 there were two sons born the first died in his infancy, the second Charles Lyell born in 1810 now Gardener to Lord Beresford at Bedgebury Park near Goudhurst in Kent. About 1811 my father added the nursery-business to that of the Botanic Garden which turned out anything but profitable, the ground being so bad and the labour so expensive. In Jan'y 1814, my father died as well as my sister and Grandfather, I imagine his complaint was an internal tumour at least it was a disease which none of the medical men in the neighbourhood understood, my Grandmother having died of Scrofula probably also a tumour in 1802, and ultimately my brother David of a similar disease. In Forfar after my fathers return from Edinburgh he formed an extensive collection of plants principally hardy, as well as a considerable herbarium principally British, making numerous excursions to the mountains at the same time following the profession of a country surgeon which he had qualified himself for in Edinburgh.

Had he then thrown up botany he would have done well in his new profession, for he was very successful at first, but this ultimately dwindled in consequence of his being continually out of the way when wanted in search of new botanical discoveries which is not a pursuit adapted for a poor man with a numerous family. After my fathers death I and David endeavoured to continue the business but we were both too young and [in]experienced, actually knew nothing about the matter whatever, and even if we had we could have done nothing surrounded as we were by the Forfar sharks my fathers so called friends. About the end of the year 1815 my mother left Forfar with Patrick, James and Charles to reside at Newburgh in Fifeshire, and my brother David and myself went to Edinburgh. My mother afterwards left Newburgh and went to live at Gask and from thence to Smithy Haugh where she died about 1836 of a disease of the heart.

After my fathers death the only true friends we had besides (yourself) who countenanced myself as well as all my brothers was General Sir David Leighton of the East India Company's Service a relation (cousin) of my father by my grandmother's side and James Brodie of Brodie who both remitted sums direct to my mother on 2 or 3 different occasions.

My fathers publications were few, they were the 1 "Hortus Siccus"; 2 "Plants and Animals of Forfarshire" published in Hederwicks Statistical Account of Forfarshire; 3 A paper on Fiorin grass *Agrostis stolonifera*, published in some Society's Transactions, 4 Some account of the varieties of Scotch-Fir &c.

Answers to your questions.

My father never became an assistant to a Professor of botany in Glasgow it was David. He went from Forfar to Edinburgh not from Glasgow to Edinburgh. He had a lease of 99 years of the Doo-hillock. I am not aware who made him first known to Sir J. E. Smith, however the thing was perfectly easy perhaps Mr. John

Mackay perhaps Mr. James Dickson of Covent Garden. Sir J. E. Smith, however, made my father known to the then Bishop of Carlisle, who kept up a botanical correspondence with him till his death. He was recommended to Dr. Rutherford by James Brodie of Brodie, who after his return to Forfar used all his influence to procure for him Kensington Gardens after the death of Mr. Forsyth, but the present Mr. W. Aitons' power was too great. The garden at Forfar never was sublet during my father's life, but he left it in the care of my grandfather during his residence in Edinburgh, who resided on the spot.

Patrick and James were born at Leith Walk, not Charles who was born at Forfar after our return from Edinburgh. My father began to practise as a Surgeon immediately on his return from Edinburgh. His last excursion to the Clova mountains must have been in 1812; in 1813 he made some excursions to the West Highlands, went to Glasgow and from thence to Edinburgh for the last time when I believe he remained with you at Canonmills during his stay there. It was in autumn of 1814 you visited Forfar in company with Mr. Brown of Perth¹ my father having died the previous January at which time my mother and five sons were then alive, myself, David, Patrick, James and Charles. My sister having died in January about a fortnight after my father, my grandfather also died in the same month, year and place.

I cannot say when you visited Forfar before we removed to Edinburgh,² however we went there in 1803 or 1804. My sister, myself and David must have been the only children in existence at that time.

My Father was buried in Forfar Church-yard about a hundred yards from the Church on the South Side towards the East end of the Church.

I believe the only plants my father discovered which have not yet been rediscovered are as you say the *Hierochloe borealis* and

¹ We have Dr. Neill's own witness to the date of this visit. "I duly received your letter enclosing the order for £31 for behoof of the family of the late Mr. George Don. I scarce know by what fatality I have so long omitted to acknowledge it. I may state however that I waited till I should be able to send on acknowledgement from some one of the Committee at Forfar. This I procured when there in August last, and since that time I have been a good deal from home, in the North of England and elsewhere."

"I went by Perth and proceeded to Forfar in company with Mr. R. Brown of the Perth nurseries (an ardent Botanist, the discoverer of *Menziesia coerulea* as I once before told you, and who goes almost yearly to our mountains for living specimens of *Gentiana nivalis*, *Bartsia alpina* and other rarities) we found the two grown up sons of Mr. Don to be of the most opposite characters [here follow some remarks not complimentary to the son George Don, who apparently was determined to carry on the nursery in spite of the efforts of the Committee to dissuade him]. I have still about £80 in Sir W. Forbes's bank the Committee having wisely delayed drawing upon this fund as long as possible. *Smith Corresp. Linn. Soc.: Dr. Neill to Sir J. E. Smith, 20th October, 1814.*

² See page 62, footnote 2, of the Memoir in these "Notes."—J. B. B.

Potentilla tridentata, but that is no reason why they should not yet be refound, as it requires a practised eye to be there at the very time of flowering. But many plants become extinct in localities where they were formerly found in abundance.

Look at the life of my brother David in the Penny Cyclopædia compounded by Dr. Lankester, there is hardly a word of truth in it. He makes him attend lectures in Edinburgh when he could not have been more than 3 or 4 years old. Had he given data the thing would have looked ridiculous.

Believe me my Dear Sir Yours very truly,

GEORGE DON.

P.S. Write and let me know whether you have been able to read this scroll.

Dr. Neill must have written questioning some of the statements of the foregoing letter, for we have the following letter from Mr. George Don:—

Mr. George Don (son of the Forfar Botanist) to Dr. Neill.

44 Bedford Place, Cambden Hill, Kensington,
March 21st 1848.

My Dear Sir,—It may be that my father only learned the clockmaking and not the watch making business that mistake lies with me as I believed them to be the same, at least they are generally combined. It is also very possible that you are correct with regard to my father's excursion to England, and that it was connected with gardening, and that his first profession was that of a gardener, and that getting tired of it after his return from England apprenticed himself to a clockmaker in Dumblane; however you might gain some information on this head from Mr James Miller S.S.C. or Solicitor to the Supreme Court in Edinburgh the son of Mr. Miller of Dupplin my father's first master. All the information I have given on this head does not rest on my authority, it was derived from Mr. James Don my father's cousin in London who probably may have been wrongly informed, had I written entirely from my own knowledge without applying to him, the object of my fathers journey to England would have corresponded with what you have said on the subject.

I think Mr. James M'Nab can give you all the information required on the subject of my father's undiscovered plants probably as you say there are two or three more such as *Chærophylllum aromaticum* and *aureum*, the former very distinct species I have seen growing wild myself near Arbroath, the latter is very difficult to distinguish if at all from *Ch. sylvestre*, it may be a variety; and possibly an *Eriophorum*, but of this genus I do not think there are more than three distinct species *E. alpinum*, *angustifolium* and *polystachion*, all the others are merely variations of the two latter, depending entirely on soil and situation for any character they may possess.

I will some day soon look over all the plants first discovered by my father, and give you a list of those that have not since been rediscovered.

And believe me to be remaining Yours sincerely,

GEORGE DON.

Dr. Neill.

In the light of this correspondence and its statements conflicting with some of those in the Memoir, we must conclude that at the present time our data are quite insufficient for the compilation of an accurate story of George Don's early life. It will be observed that the son does not answer Dr. Neill's direct question regarding the date of his father's birth, he conjectures the place was Dundee, and after giving a detailed account of his father's training and visit to London admits, when Dr. Neill doubts it, that much of it came from his father's cousin, with whom he is not prepared altogether to agree. It is evident that Dr. Neill's biographical notice, written in his later years and long after the events to which it refers, drew largely for its information upon the letter given above of George Don's son.

It has been stated¹ that a movement was begun in the middle of last century to collect funds for the purpose of erecting a monument to George Don, and we find Dr. Neill referring to this in his letter to George Don's son. Amongst papers of the late Mr. James M'Nab, to which his daughter has kindly granted me access, is the manuscript of a short communication intended for presentation to the Botanical Society of Edinburgh at its meeting in February, 1851—it may not have been read, for there is no notice of it in the minutes of the Society—in which he gives definite form to the general desire of botanists that a monument should be erected. There is no record of how far this movement went, but the following letters, which are printed by permission of Miss M'Nab, show that enquiries were made as to the position of Don's grave and the possibility of placing a monument in Forfar Churchyard:—

George Henderson (Nurseryman, Brechin) to James M'Nab.

Den Nursery,
Brechin, 17 January 1851.

Dear Sir,—We were speaking last year, on the very subject of your letter, to an old Gardener in Forfar a particular acquaintance of the late Mr. George Dons and who accompanied him on many of his excursions in search of plants in this and the neighbouring

¹ See page 88, footnote 3, of the Memoir in these "Notes."

Counties. This person was also present when he died and attended his funeral in the Church Yard of Forfar. He is moreover, if we mistake not a relation of the Sexton of Forfar who has been a good while in office as he is also of the same name. This persons account was, we are sorry to say of the same tenor as the information you already possess. He said it was now quite impossible to distinguish the exact spot or perhaps within some yards of it, but that he recollected near about the bearing of the place from the east end of the Church.

This is probably all the accuracy that could now be arrived at although we were to proceed to Forfar for the purpose [of] instituting an investigation.

I think I was mentioning to you that we had laid out a New Cemetery at Forfar last year. Prior to the opening of it the Old Church Yard was in a fearfully overcrowded state. For many years past they had been too glad to take possession of every bit which the vigilance of relatives did not keep watch upon. In many places the coffins were piled three or four above each other. Poor Mr. Dons nameless grave has probably, therefore, had several other tenants since his remains were laid there upwards of thirty years ago.

Might not the Monument be fastened on to the Church Wall "*Near this spot*"—There are several Mural Monuments there already. . . .

Dear Sir

Very truly Yours

(Signed) GEO. HENDERSON.

George Henderson to James M'Nab.

Den Nursery,
Brechin, 10 April 1851.

Dear Sir,—We have been extremely busy this long time past and hope therefore you will excuse us for not having sooner attended to your last communication.—We enclose a letter from one of the Bailies of Forfar which will give you the ideas of the people there about the matter.—What he says as to the identity of the spot is of course just hazarded without ever having been to look for the place, and I much fear that since the grave diggers know nothing about it, and since there have been no relatives about the Town to be looking after the place from time to time, other parties would be sure to search in vain—particularly in a Church Yard where no register was ever kept. . . .

I remain Dear Sir

Yours truly

(Signed) GEO. HENDERSON.

[Enclosure.]

James Ramsay to Messrs. Henderson.

Forfar, 7th April 1851.

Messrs. Henderson & Sons.

Dear Sirs,—I have communicated your letter of 24th ult. to the Magistrates and others and find there will be no objections to the proposed Monument to the memory of the late Mr. Don.

Some of his acquaintances here say they can point out the spot where he was buried, and if the Monument is not placed over his grave, it may be erected on the Church Wall.

The general impression here, however, is that the latter site would be very disadvantageous on account of the great expense &c., and I am convinced a very slight examination of those already up will satisfy any one of this.

Seeing the Old Church-Yard is now shut up, and not in any way resorted to, being so unfit for a place of recreation, a considerable number of influential people here are of the opinion that the *proper place* for the erection would be the *New Cemetery* where an appropriate site would at once be obtained. You might mention this to the promoters and if they adopt this, an attempt may be made to procure a few subscriptions in addition to the gratuitous site.

I am Dear Sirs

Yours truly

(Signed) JAS. RAMSAY.

For permission to print the following copy of a manuscript in the writing of Mr. William M'Nab I am also indebted to Miss M'Nab. It is interesting as giving us some idea from George Don himself of the extent of his collection of plants at Forfar, and it bears out what I have said in previous pages regarding the valuable information upon horticultural and botanical history that would be available should Dr. Neill's papers be discovered:—

NOTES FROM MR. DONS LETTERS TO MR. NEIL 3 & 4 DEC. 1812.

My Botanic Garden where I keep my Collection of Herbaceous Plants and a plant of each kind of Tree and Shrub is measured one Acre but perhaps it is a large one. I entered to it at Whitsunday 1796. I have a lease for 99 years of Charles Gray Esq^r of Carse. My Collection at present consists of the following *viz*

of Grasses including Carexes and the	} 350
Remarkable varieties	
Annuals different species	
	1250

and if the varieties such as are sold in	
Seed shops were added would amount	}
to 300 or 400 more would be Total .	
Species of Shrubs and Trees and the	
Remarkable varieties	1230
Biennials or short lived Plants }	
not including varieties	330
Perennials not including varieties	2588
If the varieties were added would amount	}
to 400 at least more	
Green House Plants besides varieties	1200

I have a large collection of Roses perhaps more different species than is to be found in any Collection in Britain.

I have I beleive the most extensive collection of Willows that is to be met with in any collection in Britain. I have several new species I have discovered myself of that Family.

I have a few of the best sort of the *Pinus sylvestris* since I wrote the report I visited that extensive Forrest at Mar Lodge, and I find that all the most remarkable Trees are of that variety. I measured several of them which measured from 15 feet to 18 feet in circumference and they were from 70 to 100 feet in high.

Rare Green House Plants.

Oxalis secunda
 " *tetraphylla*
 " *asinina*
 " *coccinea*
 " *incarnata*
 " *repens*
 " *rosacea*
Tulbagea alliacea
Tropaeolum hybridum
 " *pinnatum*
Laurus fetans
Sempervivum glutinosum
Mimosa saponaria
Salvia spinosa
 " *hirsuta*
Lobelia minuta
 " *Bellidifolia*
Carex australis
Cyperus Brizoides
Bupleurum coreaceum
Campanula saxatilis

(Hardy). Shrubs.

Pyrus nivalis
 " *angustifolia*

Berberis sibirica
 " *illicifolia*
 " *chinensis*
Ribes dicantha
Rubus virginicus
 " *sanguinolenta*
 " *Intermedius*
Rhamnus alioides [alnoides]
Genista hispanica
 " *Lusitanica*
 " *sibirica*
Cornus sibiricus
 " *circinata*
Cytisus elongatus
 " *Leucanthus*
Viburnum ulmifolium
Juniperus alpinus
 " *repens*
Arbutus thymifolia
Vaccinium pensylvanicum
Andromeda Cassinifolia
Spiraea ulmifolia
 " *chamædrifolia*
Robinia macrophylla
Salix lanata of *Linn*
 " *glauca*
 " *rupestris*
Iva frutescens

Empetrum album
Prunus depressus
" serotina
" chamæcerasus
" Susquhanna
" pensylvanica
" semperflorens

Betula odorata
" glabra
Clethra scabra
" acuminata

Rare Roses.

Rosa fenestrata
" × suaveolens
" Teneriffenses
" Camschatense
" lucida
" olympica
" Cheirolepis
" mollis
" caesia
" × nivalis
" × sanguisorbifolia
" multiflora

Rare Herbaceous Plants.

Selinum pyrenaicum
Peucedanum caucasicum
Sison salsum
Bubon rigidus
Daucus rigidus
Thapsia foetida
Panix quinquefolia
Phytolacca campanuloides
Dianthus arenarius
Astrantia minor
Viola pensylvanica
" Rothmagensis
" villosa
Ranunculus abortivus
Pothus foetida
Polymnia uvifolia
Geranium Ibericum

Geranium argenteum
Salvia nutans
" [name cut off].
Pyrethrum ptarmicifolium
" Caucasicum

Rare foreign Carexes.

Carex Cyperoides
" granularis
" flexuosa
" crinata

Rare foreign Grasses.

Melica exasperata
Festuca diandra
" lævis
" cristata
Poa peruviana
" flava
" laxa
" Mollinerii
" Baldensis
Phleum capense
Avena distophylla
Campanula alliarifolia
Scutellaria pubescens
Achillea distans
" bipinnata
Silene petraea
" repens
Carduus serratuloides
Astragalus dauricus
" aristatus
" austriacus
Trifolium montanum
" bracteatum
" expansum
Plantago alpina
Rubus pistillaris
Lysimachia angustifolia
Justicia americana
Euphorbia epithymoides
" androssæmifolia
Pyrola maculata
" umbellata

¹ those marked thus × are new species of my discovery.

I need not call to your mind that I was 3 Botanical excursion last summer where I discovered among other things the following rarietis—a non-discript species of *Juncus* and the *Carex rariflora* of Walenberg. vide S[t]ockholm Transactions—and the Beautiful *Astragalus campestris* of *Linn* a valuable acquisition and the True *Salix Lanata* of *Linn* by far the Beautifulest of that Genus, besides what I take to be the True *Ranunculus nivalis* of *Linn* and 2 non discript species of *Salix*—the *Astragalus* and *Carex* and *Salix* are from the Clova Mountains the others from the high mountains which surround the head of Dee.

Of my discoverys I think the following the most remarkable all of which I have growing in my Garden.

<i>Eriophorum gracile</i>	<i>Myosotis repens</i> , new species
" <i>capitatum</i>	<i>Cherophyllum aromaticum</i>
<i>Phleum Michilii</i>	" <i>aureum</i>
<i>Arundo stricta</i>	<i>Saxifraga elongilla</i>
" <i>riparia</i>	" <i>pedatifida</i>
<i>Poa depauperata</i> , new species	<i>Arenaria chlorifolia</i>
<i>Avena planiculmis</i>	" <i>fastigiata</i>
" <i>poæfolia</i> , new species	<i>Stellaria scapigera</i>
<i>Triticum cristatum</i>	<i>Lychnis alpina</i>
" <i>alpinum</i> , new sp.	<i>Spergula saginoides</i>
<i>Rottboellia filiformis</i>	<i>Rosa sanguisorbifolia</i>
<i>Aira glomerata</i> , new species	" <i>nivalis</i>
" <i>laevigata</i>	" <i>suaveolens</i> } all new species
<i>Carex ustulata</i>	<i>Potentilla tridentata</i>
" <i>rariflora</i>	" <i>opaca</i>
" <i>salina</i>	<i>Ranunculus nivalis</i>
" <i>straminea</i>	" <i>alpestris</i>
<i>Juncus</i> , new species	<i>Myagrum paniculatum</i>
" <i>gracilis</i>	<i>Draba elongata</i> , new species
" <i>castaneus</i>	<i>Anthyllis alpina</i> , new species
<i>Galium spurium</i>	<i>Astragalus campestris</i>
" <i>verrucosum</i>	. . . [name clipped off at bottom of page].
<i>Sagina maritima</i>	